KOLAR Document ID: 1409342

Confidentiality Requested:

Yes No

# Kansas Corporation Commission Oil & Gas Conservation Division

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

# WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No.:
Name:	Spot Description:
Address 1:	
Address 2:	Feet from  North / South Line of Section
City: State: Zip: +	Feet from _ East / _ West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
	Producing Formation:
☐ Oil ☐ WSW ☐ SWD	Elevation: Ground: Kelly Bushing:
☐ Gas ☐ DH ☐ EOR	Total Vertical Depth: Plug Back Total Depth:
☐ OG ☐ GSW	Amount of Surface Pipe Set and Cemented at: Feet
CM (Coal Bed Methane)	
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used?
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set: Feet
Operator:	If Alternate II completion, cement circulated from:
Well Name:	feet depth to:w/sx cmt.
Original Comp. Date: Original Total Depth:	
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD	Drilling Fluid Management Plan
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer	(Data must be collected from the Reserve Pit)
Described	Chloride content: ppm Fluid volume: bbls
☐ Commingled Permit #:	Dewatering method used:
SWD Permit #:	Location of fluid disposal if hauled offsite:
EOR Permit #:	Location of fluid disposal if flauled offsite.
GSW Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R
Recompletion Date  Recompletion Date	County: Permit #:

#### **AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

**Submitted Electronically** 

KCC Office Use ONLY				
Confidentiality Requested				
Date:				
Confidential Release Date:				
Wireline Log Received Drill Stem Tests Received				
Geologist Report / Mud Logs Received				
UIC Distribution				
ALT I III Approved by: Date:				

KOLAR Document ID: 1409342

#### Page Two

Operator Name: _				Lease Name:			Well #:	
Sec Twp.	S. R.	E	ast West	County:				
	flowing and shu	ut-in pressures, v	vhether shut-in pre	ssure reached st	atic level, hydrosta	tic pressures, bot		val tested, time tool erature, fluid recovery,
Final Radioactivity files must be subm						iled to kcc-well-lo	gs@kcc.ks.gov	v. Digital electronic log
Drill Stem Tests Ta			Yes No			on (Top), Depth ar		Sample
Samples Sent to 0	Geological Surv	/ey	Yes No	Na	me		Тор	Datum
Cores Taken Electric Log Run Geologist Report / List All E. Logs Ru	_		Yes No Yes No Yes No					
		B	CASING eport all strings set-c		New Used	ion, etc.		
Purpose of Strir		Hole illed	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
			ADDITIONAL	CEMENTING / SO	UEEZE RECORD			
Purpose:		epth T Bottom	ype of Cement	# Sacks Used		Type and F	Percent Additives	
Perforate Protect Casi Plug Back T								
Plug Off Zor								
Did you perform a     Does the volume     Was the hydraulic	of the total base f	fluid of the hydrauli		_	=	No (If No, sk	ip questions 2 an ip question 3) out Page Three	,
Date of first Product Injection:	tion/Injection or R	esumed Production	Producing Meth	nod:	Gas Lift 0	Other (Explain)		
Estimated Production Per 24 Hours	on	Oil Bbls.					Gas-Oil Ratio	Gravity
DISPOS	SITION OF GAS:		N	METHOD OF COMP	LETION:			DN INTERVAL: Bottom
	Sold Used	I on Lease	Open Hole			mmingled mit ACO-4)	Тор	BOROTT
,	,			B.11 B1				
Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid,	Fracture, Shot, Cer (Amount and Kind	menting Squeeze I of Material Used)	Record
TUBING RECORD:	: Size:	Set	Δ+-	Packer At:				
TODING RECORD:	. 3126.	Set	n.	i donei Al.				

Form	ACO1 - Well Completion	
Operator	Val Energy, Inc.	
Well Name	OTTO 2-21	
Doc ID	1409342	

# Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight		Type Of Cement		Type and Percent Additives
Surface	12.25	8.625	24	262	Surface Blend	190	2% Gel, 3@ CaCl
Production	7.875	5.5	14	4851	ThixoBlen d	150	2% Gel, 3@ CaCl



Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri 21-8s-35w Thomas

Otto #2-21

Job Ticket: 63854

DST#: 1

Test Start: 2018.03.31 @ 16:15:12

## **GENERAL INFORMATION:**

Formation: LKC A-C

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:36:37 Time Test Ended: 23:28:21

Interval: 4146.00 ft (KB) To 4205.00 ft (KB) (TVD)

Total Depth: 4205.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Ray Schwager

Reference Elevations:

3306.00 ft (KB)

 $3298.00 \;\; \text{ft (CF)} \\ \text{KB to GR/CF:} \qquad 8.00 \;\; \text{ft}$ 

Serial #: 8360 Press@RunDepth:

Start Date:

Start Time:

Inside

344.16 psig @ 2018.03.31

16:15:12

4149.00 ft (KB) End Date:

End Time:

2018.03.31

23:28:21

Capacity: Last Calib.:

Time Off Btm:

Tester:

Unit No:

8000.00 psig

2018.03.31

Time On Btm:

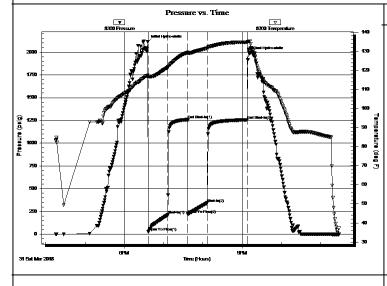
2018.03.31 @ 18:35:52 2018.03.31 @ 21:11:51

TEST COMMENT: 30-IFP-w eak to BOB in 10 min

30-ISIP-no blow back

30-FFP-w eak to BOB in 20 min

60-FSIP-no blow back



## PRESSURE SUMMARY

Time	Pressure	Temp	Annotation
(Min.)	(psig)	(deg F)	
0	2109.93	117.28	Initial Hydro-static
1	25.54	116.64	Open To Flow (1)
31	212.92	121.47	Shut-In(1)
61	1257.88	129.26	End Shut-In(1)
62	220.65	128.93	Open To Flow (2)
91	344.16	131.51	Shut-In(2)
152	1255.84	134.70	End Shut-In(2)
156	1979.66	135.20	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
625.00	Water	6.24
150.00	MW 15%M85%W	2.10

#### Gas Rates

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc Ref. No: 63854 Printed: 2018.04.01 @ 07:42:21



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

Tester:

Unit No:

Capacity:

125 N. Market St. STE 1110

SIE 1110

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri Job Ticket: 63854

Test Start: 2018.03.31 @ 16:15:12

## GENERAL INFORMATION:

Formation: LKC A-C

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:36:37 Time Test Ended: 23:28:21

Interval:

4146.00 ft (KB) To 4205.00 ft (KB) (TVD)

Total Depth: 4205.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Ray Schwager

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8000.00 psig

DST#: 1

Reference Elevations: 3306.00 ft (KB) 3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: psig @ 4149.00 ft (KB)

Start Date: 2018.03.31 End Date: 2018.03.31 Last Calib.: 2018.03.31

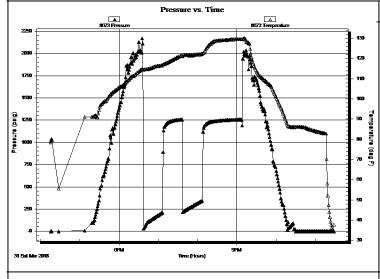
Start Time: 16:15:28 End Time: 23:28:37 Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IFP-w eak to BOB in 10 min

30-ISIP-no blow back 30-FFP-w eak to BOB in 20 min

30-FFP-w eak to BOB in 20 min 60-FSIP-no blow back



PRESSURE S	SUMMARY
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J				
	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	

#### Recovery

Length (ft)	Description	Volume (bbl)
625.00	Water	6.24
150.00	MW 15%M85%W	2.10
1	<del>-</del>	·

#### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
	•,	, ,

Trilobite Testing, Inc Ref. No: 63854 Printed: 2018.04.01 @ 07:42:21



**FLUID SUMMARY** 

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63854

DST#: 1

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.03.31 @ 16:15:12

## **Mud and Cushion Information**

Mud Type: Gel Chem Cushion Type: Oil API: deg API

Mud Weight: 9.00 lb/gal Cushion Length: ft Water Salinity: 54000 ppm

Viscosity: 60.00 sec/qt Cushion Volume: bbl

Water Loss: 6.40 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 3400.00 ppm Filter Cake: 1.00 inches

## **Recovery Information**

## Recovery Table

	Length ft	Description	Volume bbl
	625.00	Water	6.242
İ	150.00	MW 15%M85%W	2.104

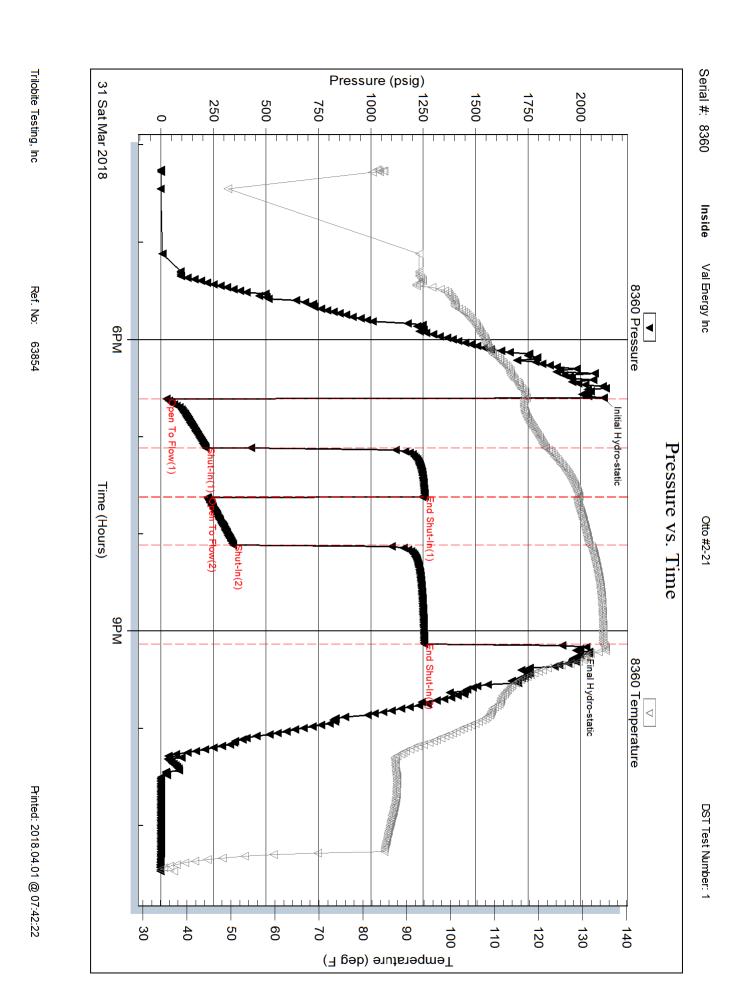
Total Length: 775.00 ft Total Volume: 8.346 bbl

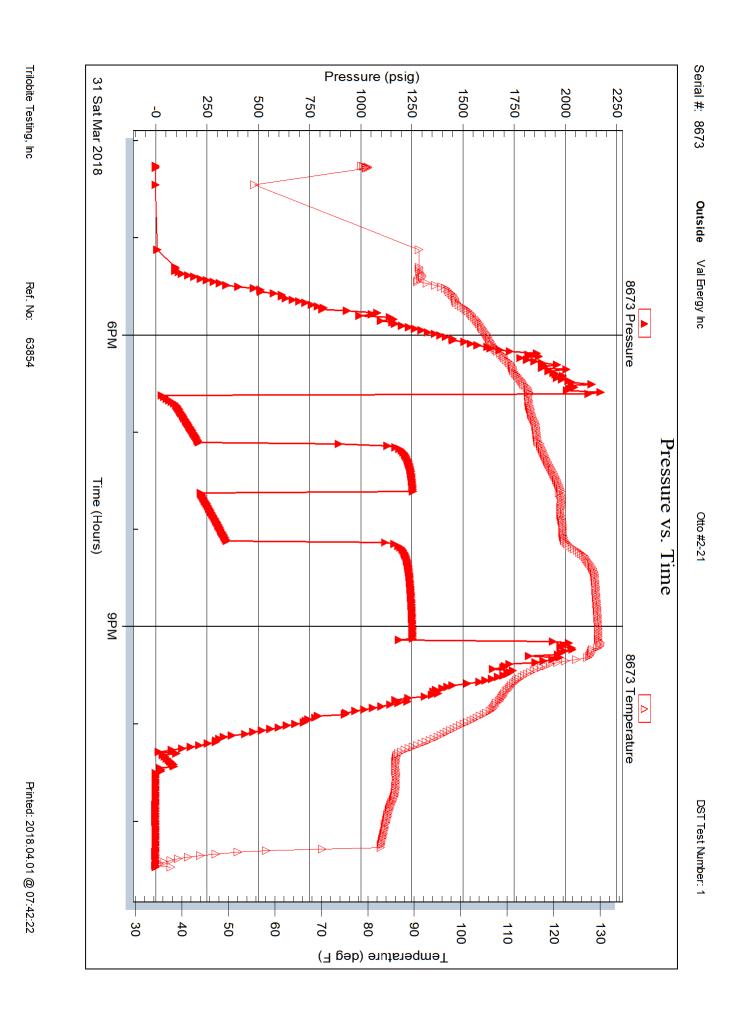
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW .15 @ 65F

Trilobite Testing, Inc Ref. No: 63854 Printed: 2018.04.01 @ 07:42:22







Val Energy Inc

STE 1110

125 N. Market St.

21-8s-35w Thomas

Otto #2-21

Job Ticket: 63855

DST#: 2

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.01 @ 18:20:45

## GENERAL INFORMATION:

LKC "J" Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:32:10 Time Test Ended: 00:51:24

Interval: 4326.00 ft (KB) To 4348.00 ft (KB) (TVD)

Total Depth: 4348.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair Test Type: Conventional Bottom Hole (Reset)

Ray Schwager 77

Unit No:

Tester:

Reference Elevations: 3306.00 ft (KB)

3298.00 ft (CF)

KB to GR/CF: 8.00 ft

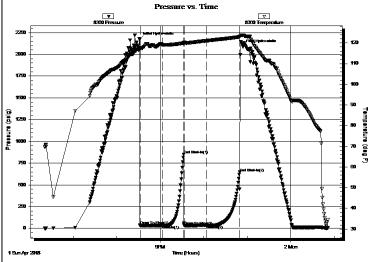
Serial #: 8360 Inside

Press@RunDepth: 4327.00 ft (KB) Capacity: 37.25 psig @ 8000.00 psig

Start Date: 2018.04.01 End Date: 2018.04.02 Last Calib.: 2018.04.02 Start Time: 18:20:45 End Time: 00:51:24 Time On Btm: 2018.04.01 @ 20:31:40 2018.04.01 @ 22:54:09 Time Off Btm:

TEST COMMENT: 30-IFP-w eak blow thru-out 1/4blow

30-ISIP-no blow back 30-FFP-no blow 45-FSIP-no blow back



	PRESSURE SUMMARY				
	Time	Pressure	Temp	Annotation	
	(Min.)	(psig)	(deg F)		
	0	2170.03	117.52	Initial Hydro-static	
	1	34.83	117.14	Open To Flow (1)	
	31	35.53	119.08	Shut-In(1)	
,	61	850.39	119.93	End Shut-In(1)	
3	62	33.55	120.00	Open To Flow (2)	
	92	37.25	121.01	Shut-In(2)	
(1	138	644.51	122.94	End Shut-In(2)	
9	143	2089.11	123.71	Final Hydro-static	

## Recovery

Length (ft)	Description	Volume (bbl)		
10.00	MGO 5%G40%M55%O	0.00		
* Recovery from multiple tests				

Gas Rat		
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc. Ref. No: 63855 Printed: 2018.04.02 @ 01:27:27



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

125 N. Market St. STE 1110

Job Ticket: 63855

DST#: 2

Wichita Ks 67202-1728

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.01 @ 18:20:45

GENERAL INFORMATION:

LKC "J" Formation:

Time Tool Opened: 20:32:10

Time Test Ended: 00:51:24

Interval:

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset) Tester: Ray Schwager

Unit No:

77

3306.00 ft (KB)

4326.00 ft (KB) To 4348.00 ft (KB) (TVD) 4348.00 ft (KB) (TVD)

Reference Elevations:

3298.00 ft (CF)

Total Depth:

KB to GR/CF:

8.00 ft

Hole Diameter: 7.85 inches Hole Condition: Fair

Serial #: 8673 Outside

Press@RunDepth: 4327.00 ft (KB) psig @

8000.00 psig Capacity: Last Calib.: 2018.04.02

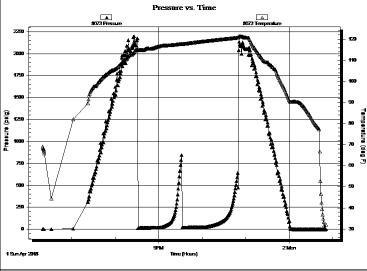
Start Date: 2018.04.01 End Date: 2018.04.02 Start Time: 18:20:34 End Time:

Time On Btm: Time Off Btm:

00:50:58

TEST COMMENT: 30-IFP-w eak blow thru-out 1/4blow

30-ISIP-no blow back 30-FFP-no blow 45-FSIP-no blow back



PRESSURE SUMMARY	•
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	Time (Min.)	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
9				
Į.				
Temperature (deg F)				
9				

#### Recovery

Length (ft)	Description	Volume (bbl)			
10.00	MGO 5% G40% M55% O	0.00			
* Recovery from mul	* Recovery from multiple tests				

#### Gas Rates

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc. Ref. No: 63855 Printed: 2018.04.02 @ 01:27:28



**FLUID SUMMARY** 

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63855

DST#: 2

Wichita Ks 67202-1728

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.01 @ 18:20:45

**Mud and Cushion Information** 

Mud Type: Gel Chem Mud Weight:

Oil API:

deg API

Filter Cake:

9.00 lb/gal

Cushion Length: Cushion Volume: Water Salinity:

ppm

Viscosity: Water Loss:

59.00 sec/qt 10.36 in<sup>3</sup>

1.00 inches

Gas Cushion Type:

Cushion Type:

psig

bbl

ft

bbl

Resistivity: ohm.m 5000.00 ppm Salinity:

**Recovery Information** 

Recovery Table

Volume Length Description ft bbl 10.00 MGO 5%G40%M55%O 0.000

Gas Cushion Pressure:

Total Length:

10.00 ft

Total Volume:

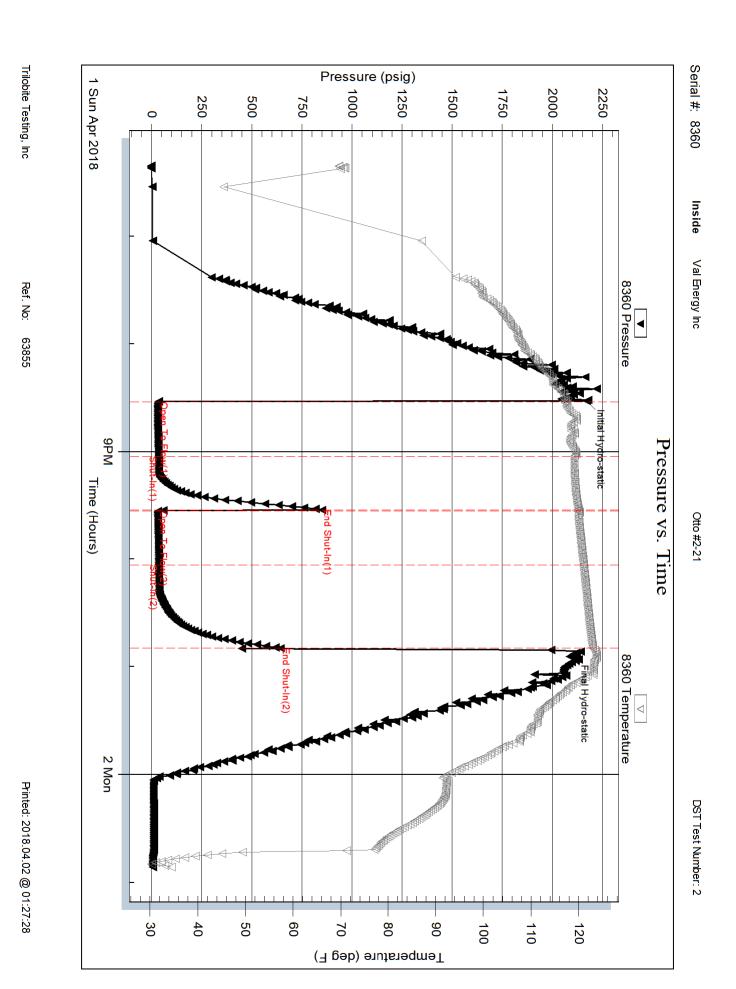
Serial #:

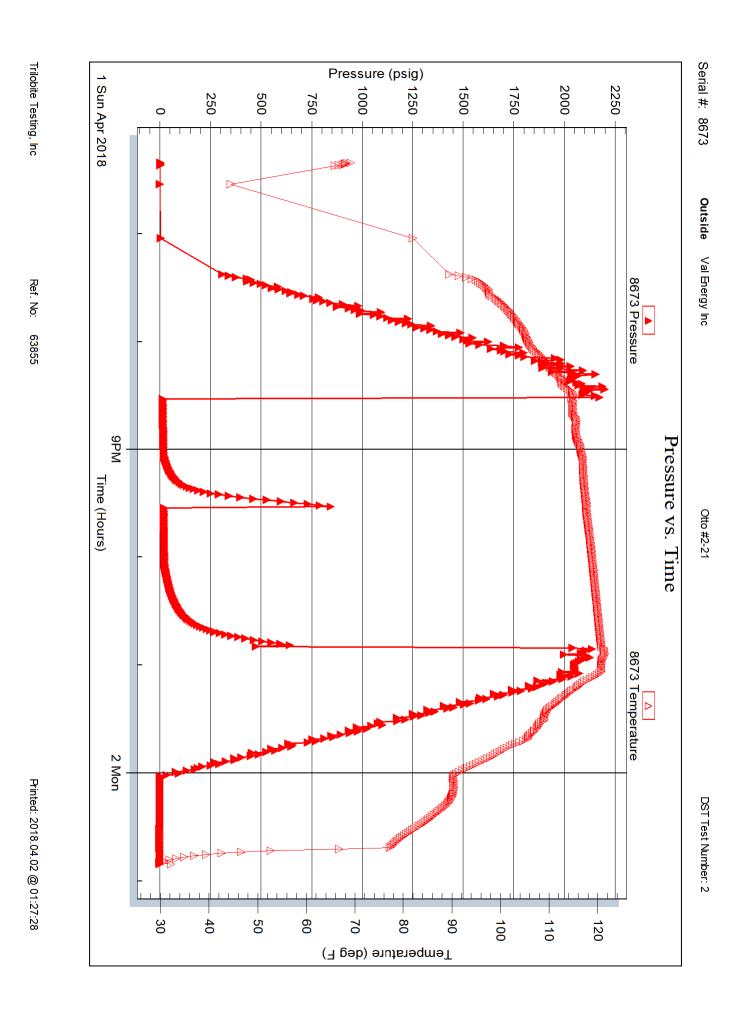
Num Fluid Samples: 0 Laboratory Name:

Num Gas Bombs: 0 Laboratory Location:

Recovery Comments:

Printed: 2018.04.02 @ 01:27:28 Trilobite Testing, Inc Ref. No: 63855







Val Energy Inc

21-8s-35w Thomas

Otto #2-21

Unit No:

125 N. Market St. STE 1110

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri Job Ticket: 63856 DST#: 3

Test Start: 2018.04.02 @ 09:25:36

## **GENERAL INFORMATION:**

Formation: LKC I,J,K

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:34:31 Time Test Ended: 17:50:45

Interval: 4295.00 ft (KB) To 4380.00 ft (KB) (TVD)

Total Depth: 4380.00 ft (KB) (TVD)

7.85 inches Hole Condition: Fair Hole Diameter:

Test Type: Conventional Bottom Hole (Reset) Tester: Ray Schwager

77 Reference Elevations:

3306.00 ft (KB) 3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8360 Inside

Capacity: Press@RunDepth: 216.25 psig @ 4297.00 ft (KB) 8000.00 psig

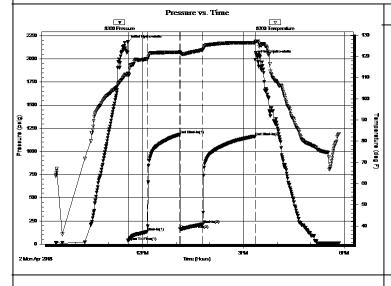
Start Date: 2018.04.02 End Date: 2018.04.02 Last Calib.: 2018.04.02 Start Time: 09:25:36 End Time: 17:50:45 Time On Btm: 2018.04.02 @ 11:33:46 Time Off Btm: 2018.04.02 @ 15:25:15

TEST COMMENT: 30-IFP-w eak to BOB in 12min

60-ISIP-BOB blow back in 58 min

45-FFP-BOB thru-out

90-FSIP-BOB blow back thru-out



Time	Pressure	ıemp	Annotation
(Min.)	(psig)	(deg F)	
0	2177.69	111.67	Initial Hydro-static
1	34.13	110.81	Open To Flow (1)
35	133.99	118.84	Shut-In(1)
93	1183.05	121.98	End Shut-In(1)
94	161.39	121.65	Open To Flow (2)
134	216.25	123.14	Shut-In(2)
227	1160.42	126.38	End Shut-In(2)

232

2018.05

PRESSURE SUMMARY

Recovery

Length (ft)	Length (ft) Description				
250.00	HO&GCM 20%G30%O50%M	0.98			
375.00	$\infty$	5.26			
0.00	1120' GIP	0.00			
* Recovery from multiple tests					

Gas Rates

127.13 Final Hydro-static

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc. Ref. No: 63856 Printed: 2018.04.02 @ 18:17:40



Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728

21-8s-35w Thomas

Otto #2-21

Job Ticket: 63856

DST#: 3

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.02 @ 09:25:36

## GENERAL INFORMATION:

Formation: LKC I,J,K

Test Type: Conventional Bottom Hole (Reset) Deviated: Whipstock: ft (KB) No

Time Tool Opened: 11:34:31 Tester: Ray Schwager 77

Time Test Ended: 17:50:45 Unit No:

Interval: 4295.00 ft (KB) To 4380.00 ft (KB) (TVD) Reference Elevations: 3306.00 ft (KB)

Total Depth: 4380.00 ft (KB) (TVD) 3298.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: 4297.00 ft (KB) Capacity: 8000.00 psig psig @

Start Date: 2018.04.02 End Date: 2018.04.02 Last Calib.: 2018.04.02

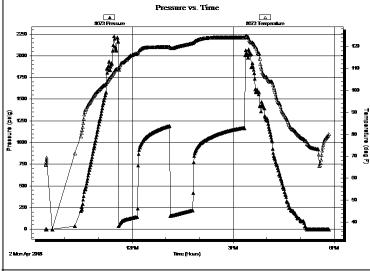
Start Time: 09:26:03 End Time: 17:50:57 Time On Btm: Time Off Btm:

TEST COMMENT: 30-IFP-w eak to BOB in 12min

60-ISIP-BOB blow back in 58 min

45-FFP-BOB thru-out

90-FSIP-BOB blow back thru-out



# PRESSURE SUMMARY

	TREGOGILE COMMINANT					
Ī	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation		
	(*******)	(1-19)	(9-)			
•						
Townson (deat E)						
9						

#### Recovery

Length (ft)	ength (ft) Description			
250.00	HO&GCM 20% G30% O50% M	0.98		
375.00	co	5.26		
0.00	1120' GIP	0.00		
* Recovery from multiple tests				

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc. Ref. No: 63856 Printed: 2018.04.02 @ 18:17:40



**FLUID SUMMARY** 

ppm

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63856

DST#: 3

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.02 @ 09:25:36

**Mud and Cushion Information** 

Mud Type: Gel Chem Cushion Type: Oil API: 39 deg API

Viscosity: 60.00 sec/qt Cushion Volume: bbl

Water Loss: 6.37 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 3400.00 ppm Filter Cake: 1.00 inches

## **Recovery Information**

## Recovery Table

Length ft	Description	Volume bbl
250.00	HO&GCM 20%G30%O50%M	0.982
375.00	CO	5.260
0.00	1120' GIP	0.000

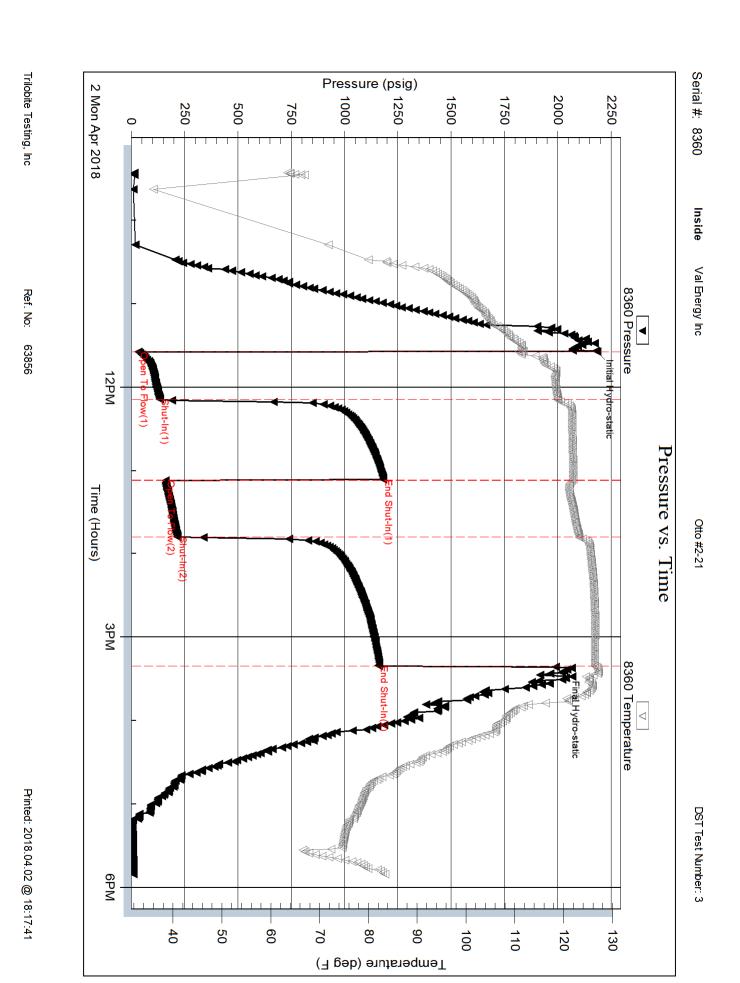
Total Length: 625.00 ft Total Volume: 6.242 bbl

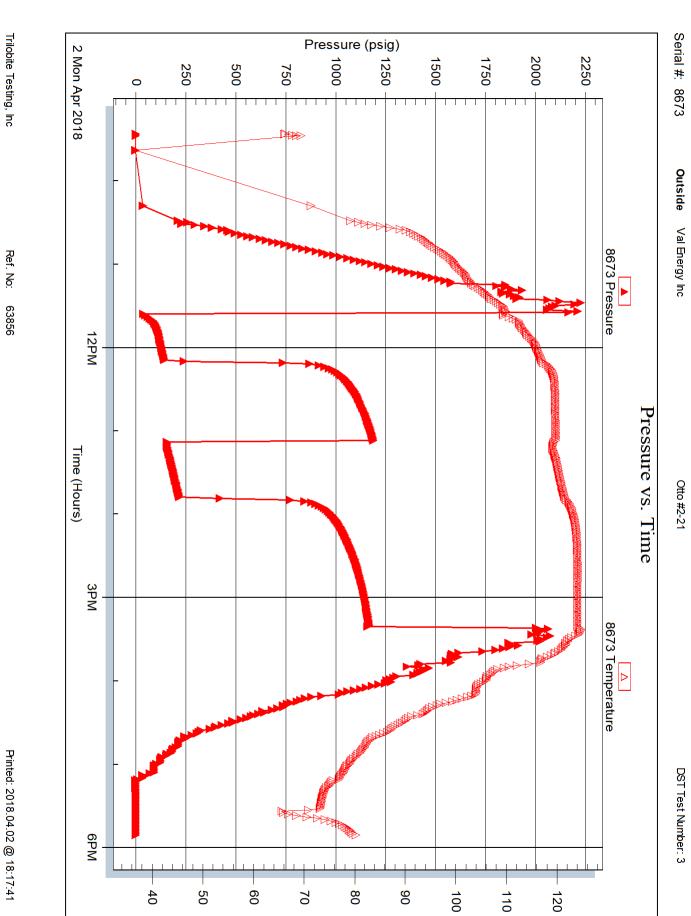
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 63856 Printed: 2018.04.02 @ 18:17:40





Temperature (deg F)



Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri 21-8s-35w Thomas

Otto #2-21

Tester:

Job Ticket: 63857

DST#: 4

Test Start: 2018.04.03 @ 17:55:22

## GENERAL INFORMATION:

Formation: Pawnee

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 20:18:32 Time Test Ended: 01:47:16

Interval: 4502.00 ft (KB) To 4550.00 ft (KB) (TVD)

Total Depth: 4550.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Unit No: 77

Reference Elevations: 3306.00 ft (KB)

Ray Schwager

ons: 3306.00 ft (KB) 3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8360 Inside

 Press@RunDepth:
 341.08 psig @
 4514.00 ft (KB)
 Capacity:
 8000.00 psig

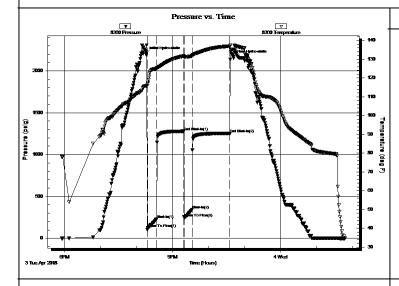
 Start Date:
 2018.04.03
 End Date:
 2018.04.04
 Last Calib.:
 2018.04.04

Start Time: 17:55:22 End Time: 01:47:16 Time On Btm: 2018.04.03 @ 20:16:17

Time Off Btm: 2018.04.03 @ 22:41:16

TEST COMMENT: 15-IFP-BOB in 2min

45-ISIP-BOB blow back 15-FFP-BOB thru-out 60-FSIP-BOB blow back



P	RESSUR	RE S	UMI	MARY

Time	Pressure	Temp	Annotation
(Min.)	(psig)	(deg F)	
0	2207.12	115.84	Initial Hydro-static
3	119.30	116.90	Open To Flow (1)
17	229.53	125.05	Shut-In(1)
63	1278.55	131.67	End Shut-In(1)
63	244.43	131.35	Open To Flow (2)
77	341.08	131.73	Shut-In(2)
140	1251.86	136.95	End Shut-In(2)
145	2164.71	135.36	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
250.00	GMO 40%G20%M40%O	0.98
680.00	co	9.54
0.00	2170' GIP	0.00
* Recovery from mul	tiple tests	

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------

Trilobite Testing, Inc Ref. No: 63857 Printed: 2018.04.04 @ 06:02:23



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

125 N. Market St. STE 1110

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri Job Ticket: 63857

Test Start: 2018.04.03 @ 17:55:22

## GENERAL INFORMATION:

Formation: Paw nee

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:18:32 Time Test Ended: 01:47:16

4502.00 ft (KB) To 4550.00 ft (KB) (TVD)

Total Depth: 4550.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Outside

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager Unit No:

DST#: 4

Reference Elevations:

3306.00 ft (KB)

3298.00 ft (CF) KB to GR/CF: 8.00 ft

Serial #: 8673

Press@RunDepth:

psig @

4514.00 ft (KB) End Date:

2018.04.04

Capacity: Last Calib.: 8000.00 psig

2018.04.04

Start Date: Start Time:

Interval:

2018.04.03 17:55:42

End Time:

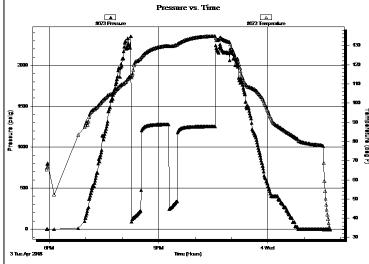
01:43:06

Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IFP-BOB in 2min

45-ISIP-BOB blow back 15-FFP-BOB thru-out 60-FSIP-BOB blow back



# PRESSURE SUMMARY

Ī	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
2				
Temperatura (dea F)				
J				

#### Recovery

Length (ft)	Description	Volume (bbl)
250.00	GMO 40%G20%M40%O	0.98
680.00	co	9.54
0.00	2170' GIP	0.00
* Recovery from mul	tiple tests	

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------

Trilobite Testing, Inc. Ref. No: 63857 Printed: 2018.04.04 @ 06:02:23



**FLUID SUMMARY** 

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63857

DST#: 4

Wichita Ks 67202-1728

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.03 @ 17:55:22

## **Mud and Cushion Information**

Mud Type:Gel ChemCushion Type:Oil API:35 deg APIMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftViscosity:57.00 sec/qtCushion Volume:bbl

7.19 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 550.00 ppm
Filter Cake: 1.00 inches

## **Recovery Information**

Water Loss:

# Recovery Table

Length ft	Description	Volume bbl
250.00	GMO 40%G20%M40%O	0.982
680.00	co	9.539
0.00	2170' GIP	0.000

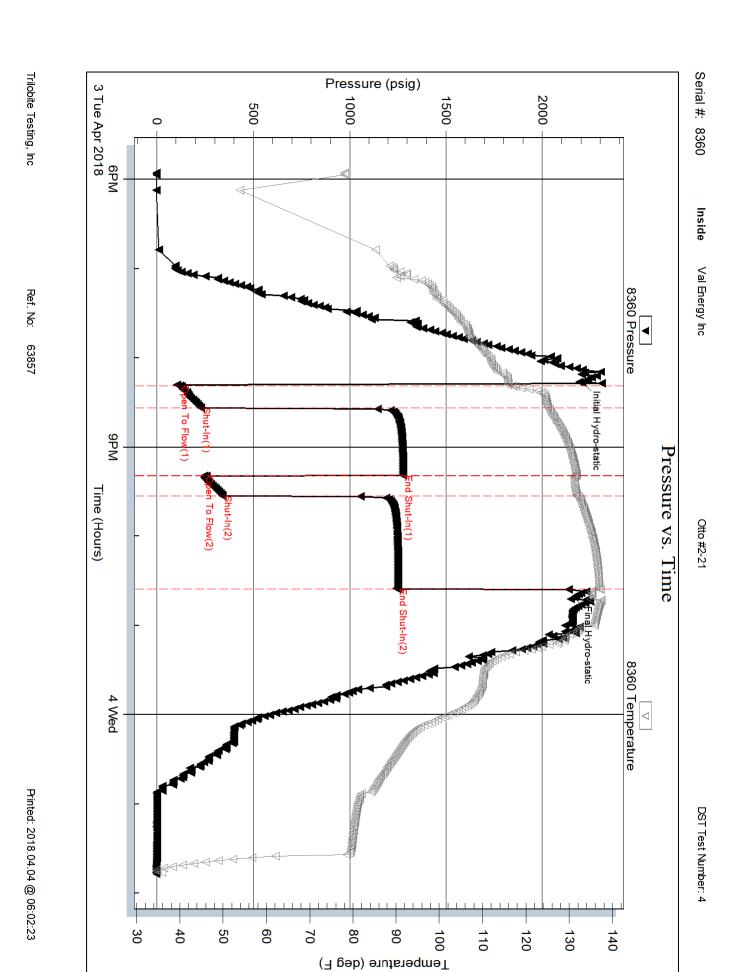
Total Length: 930.00 ft Total Volume: 10.521 bbl

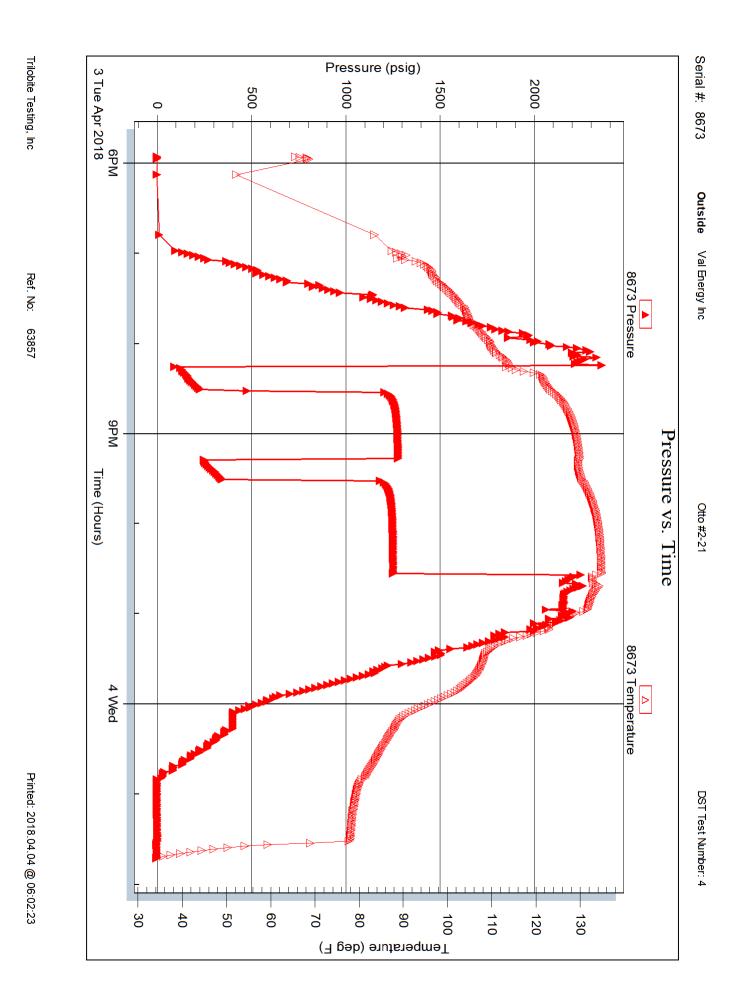
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 63857 Printed: 2018.04.04 @ 06:02:23







Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri 21-8s-35w Thomas

Otto #2-21

Tester:

Job Ticket: 63858

DST#: 5

Test Start: 2018.04.04 @ 16:20:26

## **GENERAL INFORMATION:**

Formation: Myric Sta. - Ft Scot

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 18:43:36 Time Test Ended: 00:50:20

Interval: 4550.00 ft (KB) To 4615.00 ft (KB) (TVD)

Total Depth: 4615.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Unit No: 77

Ray Schwager

Reference Elevations: 3306.00 ft (KB) 3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8360 Inside

Press@RunDepth: 102.05 psig @ 4554.00 ft (KB) Capacity: 8000.00 psig

 Start Date:
 2018.04.04
 End Date:
 2018.04.05
 Last Calib.:
 2018.04.04

 Start Time:
 16:20:26
 End Time:
 00:50:20
 Time On Btm:
 2018.04.04 @ 18:42:51

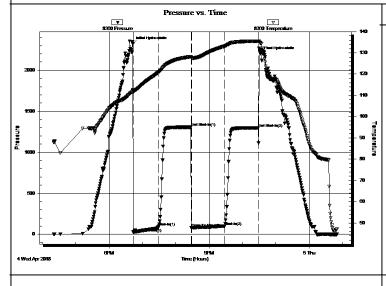
 Time Off Btm:
 2018.04.04 @ 22:33:20

TEST COMMENT: 45-IFP-w eak to BOB in 25min

60-ISIP-no blow back

60-FFP-surface to BOB in 55min

60-FSIP-no blow back



PI	RESSUR	RE SU	IMMAF	₹Y

Time	Pressure	Temp	Annotation
(Min.)	(psig)	(deg F)	
0	2322.45	112.36	Initial Hydro-static
1	23.89	111.21	Open To Flow (1)
46	93.47	120.80	Shut-In(1)
105	1306.90	128.17	End Shut-In(1)
106	80.44	127.74	Open To Flow (2)
166	102.05	133.15	Shut-In(2)
226	1298.66	135.47	End Shut-In(2)
231	2201.66	134.48	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
190.00	GMO 45%G10%M45%O	0.14
30.00	$\infty$	0.42
0.00	535' GIP	0.00
* Recovery from mult	tiple tests	

#### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
----------------	-----------------	------------------

Trilobite Testing, Inc Ref. No: 63858 Printed: 2018.04.05 @ 07:19:13



Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri 21-8s-35w Thomas

Otto #2-21

Job Ticket: 63858

DST#: 5

Test Start: 2018.04.04 @ 16:20:26

## GENERAL INFORMATION:

Formation: Myric Sta. - Ft Scot

Deviated: Whipstock: ft (KB)

Time Tool Opened: 18:43:36 Time Test Ended: 00:50:20

Interval: 4550.00 ft (KB) To 4615.00 ft (KB) (TVD)

Total Depth: 4615.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair Test Type: Conventional Bottom Hole (Reset)

77

Ray Schwager

Unit No:

Tester:

Reference Elevations:

3306.00 ft (KB)

3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Press@RunDepth: 4554.00 ft (KB) psig @

Start Date: 2018.04.04 Start Time:

16:20:54

2018.04.05 00:50:48

Capacity: Last Calib.: 8000.00 psig

2018.04.05

End Time:

End Date:

Time On Btm:

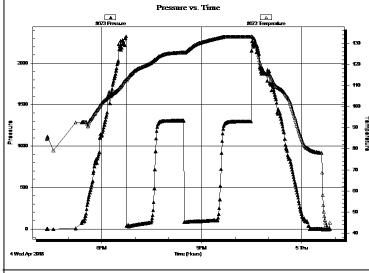
Time Off Btm:

TEST COMMENT: 45-IFP-w eak to BOB in 25min

60-ISIP-no blow back

60-FFP-surface to BOB in 55min

60-FSIP-no blow back



## PRESSURE SUMMARY

1	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
Temperatura				

#### Recovery

Length (ft)	Description	Volume (bbl)			
190.00	190.00 GMO 45%G10%M45%O				
30.00	$\infty$	0.42			
0.00	535' GIP	0.00			
* Recovery from mult	* Recovery from multiple tests				

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mct/d)	
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Trilobite Testing, Inc. Ref. No: 63858 Printed: 2018.04.05 @ 07:19:13



**FLUID SUMMARY** 

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63858

DST#: 5

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.04 @ 16:20:26

## **Mud and Cushion Information**

Mud Type:Gel ChemCushion Type:Oil API:35 deg APIMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftViscosity:61.00 sec/qtCushion Volume:bbl

6.40 in<sup>3</sup> Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 5000.00 ppm Filter Cake: 1.00 inches

## **Recovery Information**

Water Loss:

# Recovery Table

Length ft	Description	Volume bbl
190.00	GMO 45%G10%M45%O	0.140
30.00	co	0.421
0.00	535' GIP	0.000

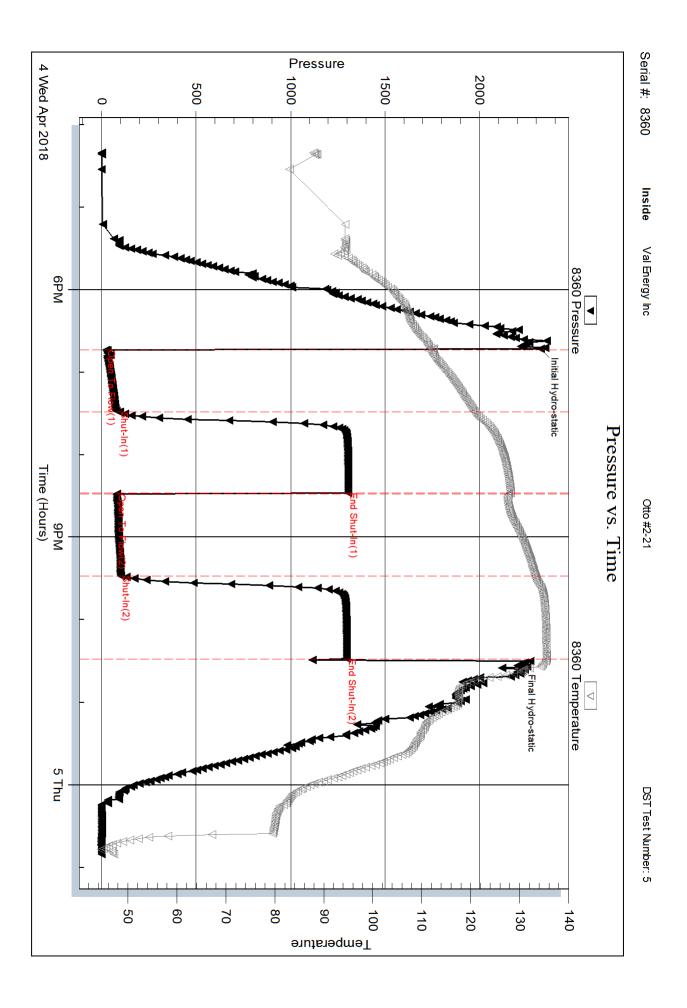
Total Length: 220.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 63858 Printed: 2018.04.05 @ 07:19:13



Printed: 2018.04.05 @ 07:19:14

Trilobite Testing, Inc

Ref. No: 63858

Printed: 2018.04.05 @ 07:19:14



Val Energy Inc

STE 1110

125 N. Market St.

21-8s-35w Thomas

Otto #2-21

Tester:

Job Ticket: 63859

**DST#: 6** 

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.05 @ 10:45:36

## GENERAL INFORMATION:

Formation: Cher Ls

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:38:46 Time Test Ended: 18:05:15

Interval: 4613.00 ft (KB) To 4655.00 ft (KB) (TVD)

Total Depth: 4655.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair Test Type: Conventional Bottom Hole (Reset)

Ray Schwager Unit No: 77

3306.00 ft (KB)

Reference Elevations:

3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8360 Inside

Press@RunDepth: 4619.00 ft (KB) 81.38 psig @

Start Date: 2018.04.05 Start Time: 10:45:36

End Date:

Capacity: 2018.04.05 Last Calib.:

8000.00 psig 2018.04.05

End Time:

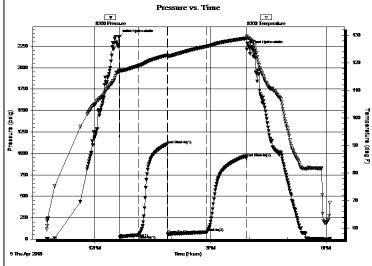
18:05:15 Time On Btm: 2018.04.05 @ 12:37:46

Time Off Btm:

2018.04.05 @ 16:00:00

TEST COMMENT: 30-IFP-w eak to a fair blow 1/4"to 5 1/2"blow

45-ISIP-surface blow back 60-FFP-w eak to BOB in 55min 60-FSIP-suface blow back



Ī	Time	Pressure	Temp	Annotation	
	(Min.)	(psig)	(deg F)		
	0	2357.85	117.21	Initial Hydro-static	
	1	19.12	117.10	Open To Flow (1)	
	31	47.98	119.07	Shut-In(1)	
	75	1106.60	122.83	End Shut-In(1)	
	76	54.76	122.52	Open To Flow (2)	
	137	81.38	126.05	Shut-In(2)	
ì	198	952.84	128.99	End Shut-In(2)	
,	203	2232.19	128.97	Final Hydro-static	

PRESSURE SUMMARY

#### Recovery

Length (ft)	Description	Volume (bbl)			
180.00	180.00 GMO 30%G10%M60%O				
5.00	co	0.07			
0.00	0.00 375' GIP				
* Recovery from mult	* Recovery from multiple tests				

Gas Rat		
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc. Ref. No: 63859 Printed: 2018.04.05 @ 20:39:21



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

125 N. Market St. STE 1110

Job Ticket: 63859

**DST#: 6** 

Wichita Ks 67202-1728

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.05 @ 10:45:36

GENERAL INFORMATION:

Formation: Cher Ls

Time Tool Opened: 12:38:46

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset) Tester: Ray Schwager

> Unit No: 77

Time Test Ended: 18:05:15

4613.00 ft (KB) To 4655.00 ft (KB) (TVD)

Reference Elevations:

3306.00 ft (KB)

Total Depth:

4655.00 ft (KB) (TVD)

3298.00 ft (CF)

Hole Diameter:

Interval:

7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8673 Press@RunDepth: Outside

psig @

4619.00 ft (KB)

Capacity: 2018.04.05 Last Calib.: 8000.00 psig

Start Date: Start Time: 2018.04.05

End Date:

18:05:27

Time On Btm:

2018.04.05

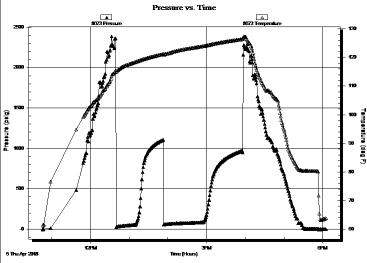
10:46:03

End Time:

Time Off Btm:

TEST COMMENT: 30-IFP-w eak to a fair blow 1/4"to 5 1/2"blow

45-ISIP-surface blow back 60-FFP-w eak to BOB in 55min 60-FSIP-suface blow back



#### PRESSURE SUMMARY

	I REGOOKE GOWING IN					
	Time	Pressure	Temp	Annotation		
	(Min.)	(psig)	(deg F)			
,						
Townson in (dex 5)						
		l l		i l		

#### Recovery

Length (ft)	Description	Volume (bbl)		
180.00	180.00 GMO 30%G10%M60%O			
5.00	$\infty$	0.07		
0.00 375' GIP		0.00		
* Recovery from multiple tests				

#### Gas Rates

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc. Ref. No: 63859 Printed: 2018.04.05 @ 20:39:21



**FLUID SUMMARY** 

ppm

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63859

DST#: 6

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.05 @ 10:45:36

## **Mud and Cushion Information**

Mud Type: Gel Chem Cushion Type: Oil API: 28 deg API

Mud Weight: 9.00 lb/gal Cushion Length: ft Water Salinity:

Viscosity: 57.00 sec/qt Cushion Volume: bbl

Water Loss: 9.55 in³ Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 9600.00 ppm Filter Cake: 1.00 inches

## **Recovery Information**

## Recovery Table

Length ft	Description	Volume bbl
180.00	GMO 30%G10%M60%O	0.000
5.00	co	0.070
0.00	375' GIP	0.000

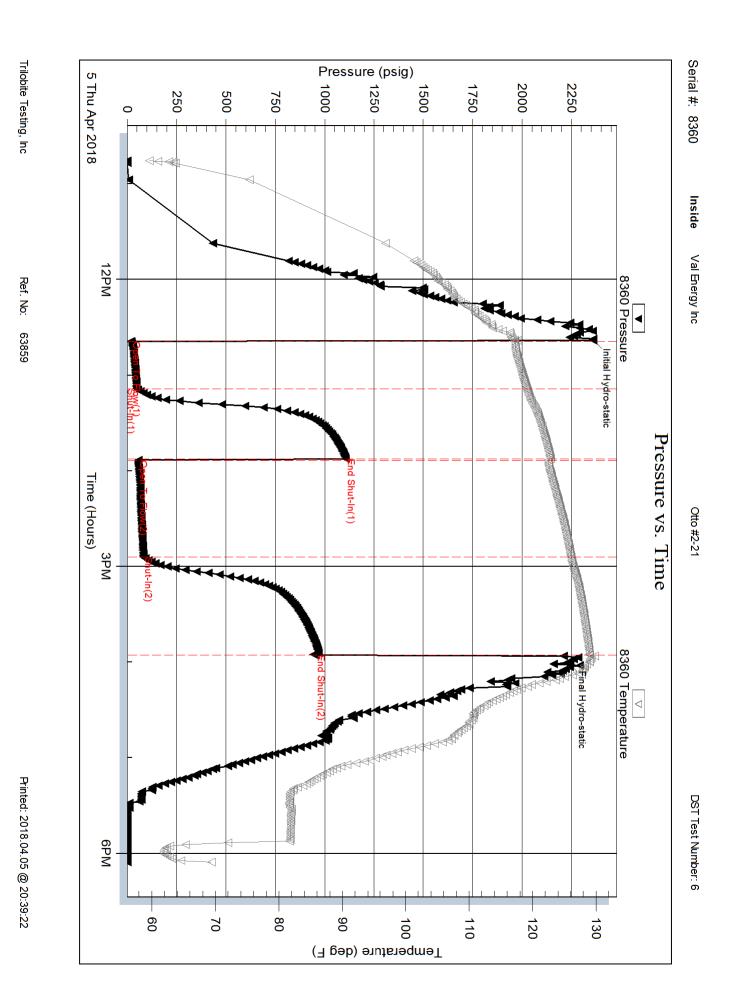
Total Length: 185.00 ft Total Volume: 0.070 bbl

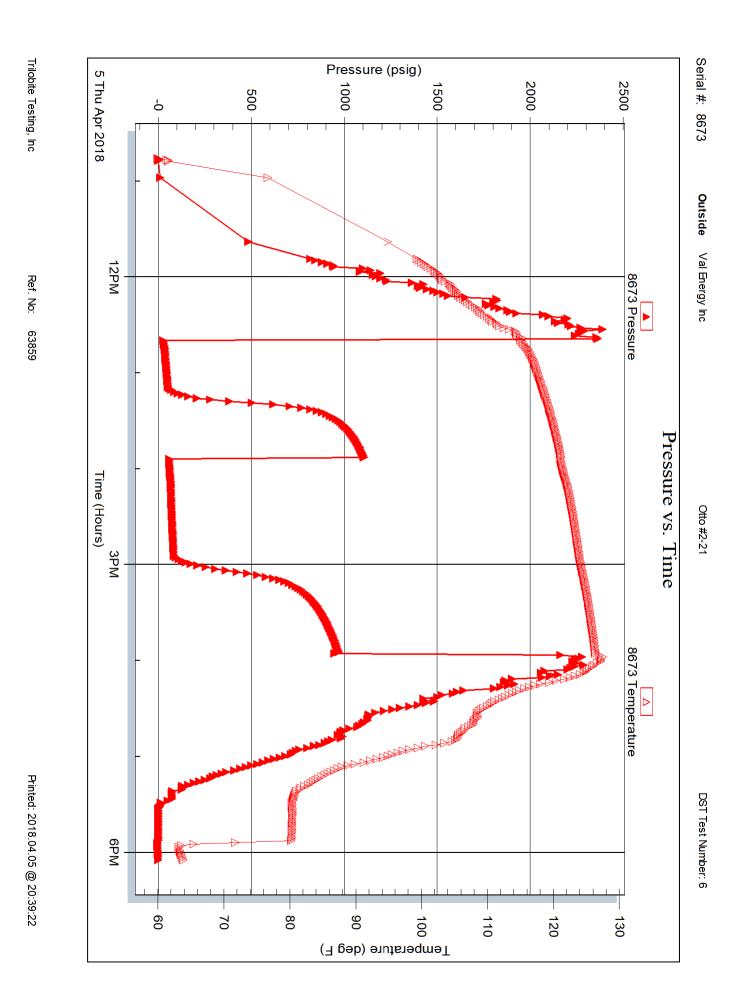
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 63859 Printed: 2018.04.05 @ 20:39:21







Val Energy Inc

STE 1110

125 N. Market St.

21-8s-35w Thomas

Otto #2-21

Job Ticket: 63860

DST#: 7

ATTN: Dustin Wyer, Tim Pri

Wichita Ks 67202-1728

Test Start: 2018.04.06 @ 02:40:11

## **GENERAL INFORMATION:**

Formation: Johnson zone

Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)

Time Tool Opened: 05:11:36 Time Test Ended: 10:48:20

Interval: 4653.00 ft (KB) To 4675.00 ft (KB) (TVD)

Total Depth: 4690.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Tester: Ray Schwager

Unit No: 77

Reference Elevations:

3306.00 ft (KB)

3306.00

3298.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8360 Inside

Press@RunDepth: 81.99 psig @ 4664.00 ft (KB) Capacity: 8000.00 psig

 Start Date:
 2018.04.06
 End Date:
 2018.04.06
 Last Calib.:
 2018.04.06

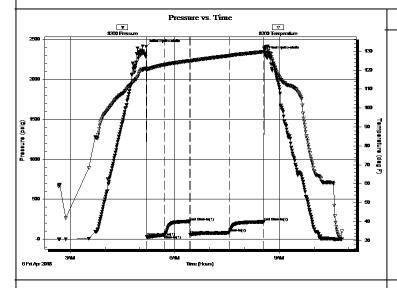
 Start Time:
 02:40:11
 End Time:
 10:48:20
 Time On Btm:
 2018.04.06 @ 05:10:51

Time Off Btm: 2018.04.06 @ 08:36:20

TEST COMMENT: 30-IFP-w eak to BOB in 22min

45-ISIP-no blow back

60-FFP-w eak to BOB in 12 min 60-FSIP-2" blow back



Р	RESSU	RE	SUM	1MAR	′

lime	Pressure	remp	Annotation
(Min.)	(psig)	(deg F)	
0	2409.23	121.00	Initial Hydro-static
1	29.98	119.97	Open To Flow (1)
31	54.23	122.83	Shut-In(1)
76	223.51	124.96	End Shut-In(1)
76	56.78	124.95	Open To Flow (2)
143	81.99	127.62	Shut-In(2)
203	218.43	129.70	End Shut-In(2)
206	2330.34	132.25	Final Hydro-static

#### Recovery

Length (ft)	Description	Volume (bbl)
120.00	MGO 10%M70%O20%G	0.00
70.00	co	0.14
0.00	920' GIP	0.00
* Recovery from mul	tiple tests	

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc Ref. No: 63860 Printed: 2018.04.06 @ 11:57:52



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

125 N. Market St. STE 1110

End Time:

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri Job Ticket: 63860 DST#: 7

Test Start: 2018.04.06 @ 02:40:11

## GENERAL INFORMATION:

Formation: Johnson zone

Deviated: Whipstock: ft (KB)

Time Tool Opened: 05:11:36 Time Test Ended: 10:48:20

Interval: 4653.00 ft (KB) To 4675.00 ft (KB) (TVD)

2018.04.06

02:40:40

Total Depth: 4690.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair Test Type: Conventional Straddle (Reset) Ray Schwager

Unit No:

Tester:

Reference Elevations:

3306.00 ft (KB)

8000.00 psig

2018.04.06

3298.00 ft (CF) KB to GR/CF: 8.00 ft

Serial #: 8673 Outside

Start Date:

Start Time:

Press@RunDepth: 4664.00 ft (KB) psig @

> End Date: 2018.04.06 Last Calib.:

> > 10:47:49 Time On Btm:

Time Off Btm:

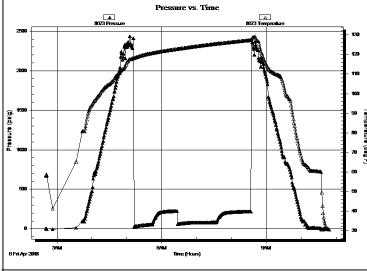
Capacity:

TEST COMMENT: 30-IFP-w eak to BOB in 22min

45-ISIP-no blow back

60-FFP-w eak to BOB in 12 min

60-FSIP-2" blow back



PRESSURE S	SUMMARY
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				_
Ī	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
<b>=</b>				
3				
Temperature (deg F)				
8				
_				

#### Recovery

Length (ft)	Description	Volume (bbl)
120.00	MGO 10%M70%O20%G	0.00
70.00	co	0.14
0.00	920' GIP	0.00
* Recovery from mul	tiple tests	

#### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Trilobite Testing, Inc. Ref. No: 63860 Printed: 2018.04.06 @ 11:57:53



Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728

21-8s-35w Thomas

Otto #2-21

Tester:

Unit No:

Job Ticket: 63860

DST#: 7

ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.06 @ 02:40:11

## GENERAL INFORMATION:

Formation: Johnson zone

Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)

Time Tool Opened: 05:11:36 Time Test Ended: 10:48:20

Interval: 4653.00 ft (KB) To 4675.00 ft (KB) (TVD)

Total Depth: 4690.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 3306.00 ft (KB)

Ray Schwager

 $3298.00 \;\; \text{ft (CF)} \\ \text{KB to GR/CF:} \qquad 8.00 \;\; \text{ft}$ 

Serial #: 8373 Below (Straddle)

 Press@RunDepth:
 psig
 @
 4681.00 ft (KB)
 Capacity:
 8000.00 psig

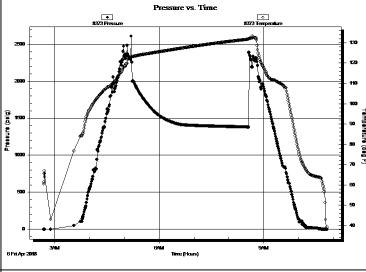
Start Date: 2018.04.06 End Date: 2018.04.06 Last Calib.: 2018.04.06

Start Time: 02:40:59 End Time: 10:48:38 Time On Btm: Time Off Btm:

TEST COMMENT: 30-IFP-w eak to BOB in 22min

45-ISIP-no blow back 60-FFP-w eak to BOB in 12 min

60-FSIP-2" blow back



PRESSURE SUMMARY
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		• • •		(L 001/11/17 11 (1
Ī	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
2				
Temperatura (dea F)				
J				

#### Recovery

Length (ft)	Description	Volume (bbl)
120.00	MGO 10%M70%O20%G	0.00
70.00	co	0.14
0.00	920' GIP	0.00
* Recovery from mu	tiple tests	

#### Gas Rates

'	Choke (inches)	Pressure (psig)	Gas Rate (Mct/d)
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Trilobite Testing, Inc Ref. No: 63860 Printed: 2018.04.06 @ 11:57:53



**FLUID SUMMARY** 

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

Otto #2-21

STE 1110

Job Ticket: 63860

Serial #:

DST#: 7

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri

Test Start: 2018.04.06 @ 02:40:11

**Mud and Cushion Information** 

Mud Type: Gel Chem Mud Weight:

1.00 inches

Oil API:

deg API

Filter Cake:

9.00 lb/gal 53.00 sec/qt Cushion Length: Cushion Volume: Water Salinity:

ppm

Viscosity: Water Loss: 9.55 in<sup>3</sup>

Gas Cushion Type: Gas Cushion Pressure:

psig

ft

bbl

Resistivity: ohm.m 9600.00 ppm Salinity:

## **Recovery Information**

## Recovery Table

Cushion Type:

Length ft	Description	Volume bbl
120.00	MGO 10%M70%O20%G	0.000
70.00	CO	0.140
0.00	920' GIP	0.000

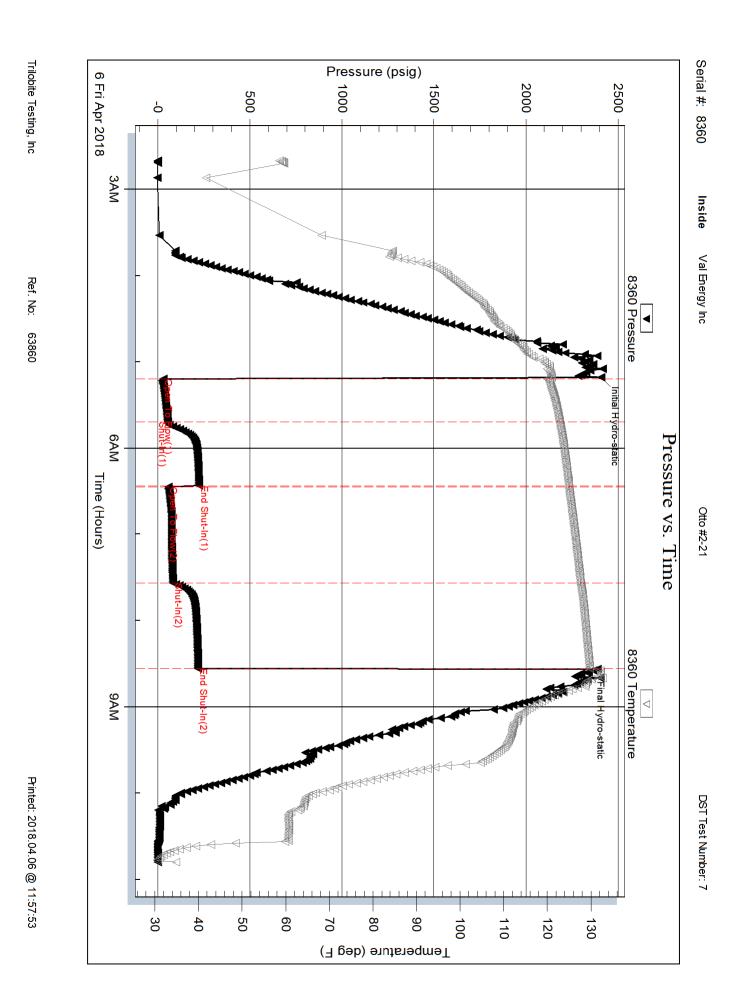
Total Length: 190.00 ft Total Volume: 0.140 bbl

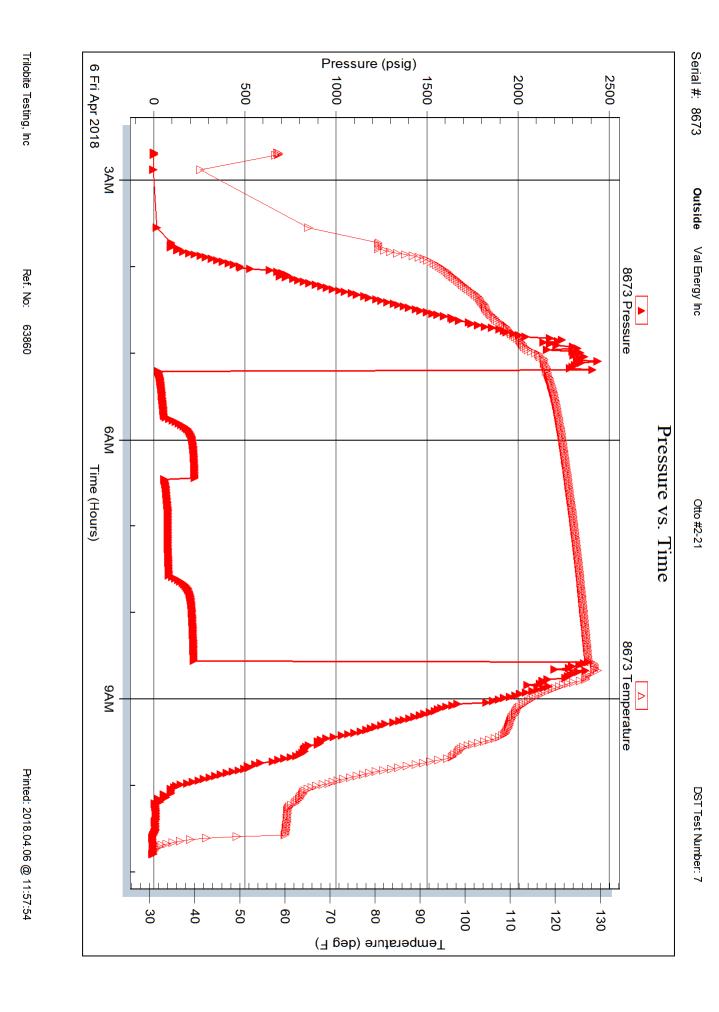
Num Fluid Samples: 0 Num Gas Bombs: 0

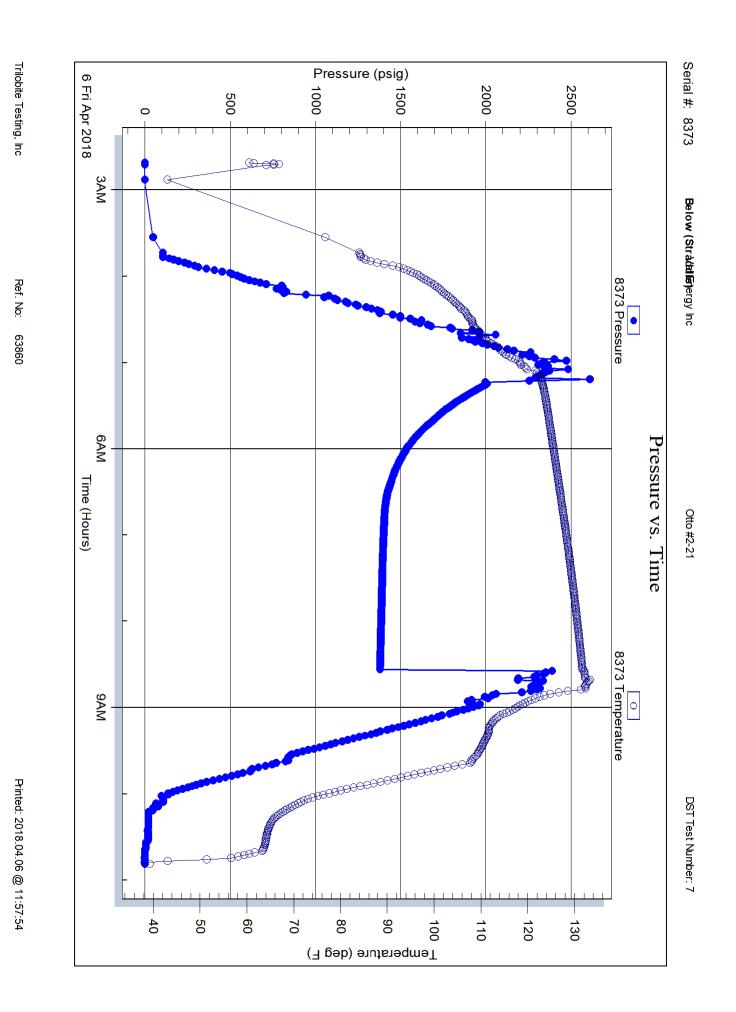
Laboratory Name: Laboratory Location:

Recovery Comments:

Trilobite Testing, Inc Ref. No: 63860 Printed: 2018.04.06 @ 11:57:53









Val Energy Inc

STE 1110

125 N. Market St.

Wichita Ks 67202-1728 ATTN: Dustin Wyer, Tim Pri 21-8s-35w Thomas

Otto #2-21

Job Ticket: 63861

DST#: 8

Test Start: 2018.04.06 @ 11:20:52

## GENERAL INFORMATION:

Formation: Johnson zone

Test Type: Conventional Bottom Hole (Reset) Deviated: Whipstock: ft (KB)

Time Tool Opened: 13:17:47 Time Test Ended: 17:52:31

Interval: 4675.00 ft (KB) To 4690.00 ft (KB) (TVD)

Total Depth: 4675.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair Tester: Ray Schwager

Unit No: 77

Reference Elevations: 3306.00 ft (KB)

3298.00 ft (CF)

KB to GR/CF: 8.00 ft

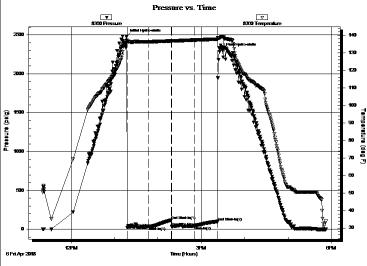
Serial #: 8360 Inside

Press@RunDepth: 4676.00 ft (KB) Capacity: 42.75 psig @ 8000.00 psig

Start Date: 2018.04.06 End Date: 2018.04.06 Last Calib.: 2018.04.06 Start Time: 11:20:52 End Time: 17:52:31 Time On Btm: 2018.04.06 @ 13:16:47 Time Off Btm: 2018.04.06 @ 15:29:32

TEST COMMENT: 30-IFP-surface to 1/4 blow

30-ISIP-no blow back 30-FFP-no blow 30-FSIP-no blow back



	PRESSURE SUMMARY								
Ī	Time	Pressure	Temp	Annotation					
	(Min.)	(psig)	(deg F)						
	0	2483.68	136.97	Initial Hydro-static					
	1	21.18	136.16	Open To Flow (1)					
	31	33.20	136.41	Shut-In(1)					
	62	118.95	136.89	End Shut-In(1)					
	63	35.63	136.87	Open To Flow (2)					
	94	42.75	137.38	Shut-In(2)					
,	126	102.04	137.89	End Shut-In(2)					
9	133	2302.16	139.29	Final Hydro-static					

DDECCLIDE CLIMMADY

## Recovery

Length (ft)	Description	Volume (bbl)				
60.00	0.00 MO 40%M60%O					
* Recovery from mult	tiple tests					

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Gas Rates

Trilobite Testing, Inc Ref. No: 63861 Printed: 2018.04.06 @ 20:31:33



Val Energy Inc

21-8s-35w Thomas

Otto #2-21

Tester:

Unit No:

Wichita Ks 67202-1728 Job Ticket: 63861

Test Start: 2018.04.06 @ 11:20:52

125 N. Market St. STE 1110

ATTN: Dustin Wyer, Tim Pri

GENERAL INFORMATION:

Formation: Johnson zone

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 13:17:47 Time Test Ended: 17:52:31

Interval: 4675.00 ft (KB) To 4690.00 ft (KB) (TVD)

Total Depth: 4675.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 3306.00 ft (KB)

Ray Schwager

 $3298.00 \;\; \text{ft (CF)} \\ \text{KB to GR/CF:} \qquad 8.00 \;\; \text{ft}$ 

DST#: 8

Serial #: 8673 Outside

 Press@RunDepth:
 psig
 @
 4676.00 ft (KB)
 Capacity:
 8000.00 psig

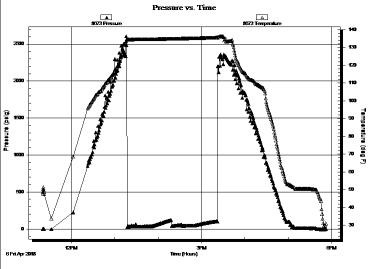
Start Date: 2018.04.06 End Date: 2018.04.06 Last Calib.: 2018.04.06

Start Time: 11:20:35 End Time: 17:52:14 Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IFP-surface to 1/4 blow

30-ISIP-no blow back 30-FFP-no blow 30-FSIP-no blow back



PRESSURE SUM	MMARY
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•	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
ď				
Temperatura (dec F)				
9				

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MO 40%M60%O	0.00
* Recovery from mult	tiple tests	

## Gas Rates

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc Ref. No: 63861 Printed: 2018.04.06 @ 20:31:33



**FLUID SUMMARY** 

deg API

Val Energy Inc

21-8s-35w Thomas

125 N. Market St.

STE 1110

Wichita Ks 67202-1728

ATTN: Dustin Wyer, Tim Pri

Job Ticket: 63861

Serial #:

Otto #2-21

DST#: 8

Test Start: 2018.04.06 @ 11:20:52

**Mud and Cushion Information** 

Mud Type: Gel Chem Cushion Type: Oil API: Mud Weight: Cushion Length: 9.00 lb/gal ft Water Salinity:

Viscosity: 53.00 sec/qt Cushion Volume: bbl

Water Loss: 9.57 in<sup>3</sup> Gas Cushion Type:

Resistivity: Gas Cushion Pressure: ohm.m psig

9600.00 ppm Salinity: Filter Cake: 1.00 inches

ppm

## **Recovery Information**

## Recovery Table

Length ft		Description	Volume bbl
	60.00	MO 40%M60%O	0.000

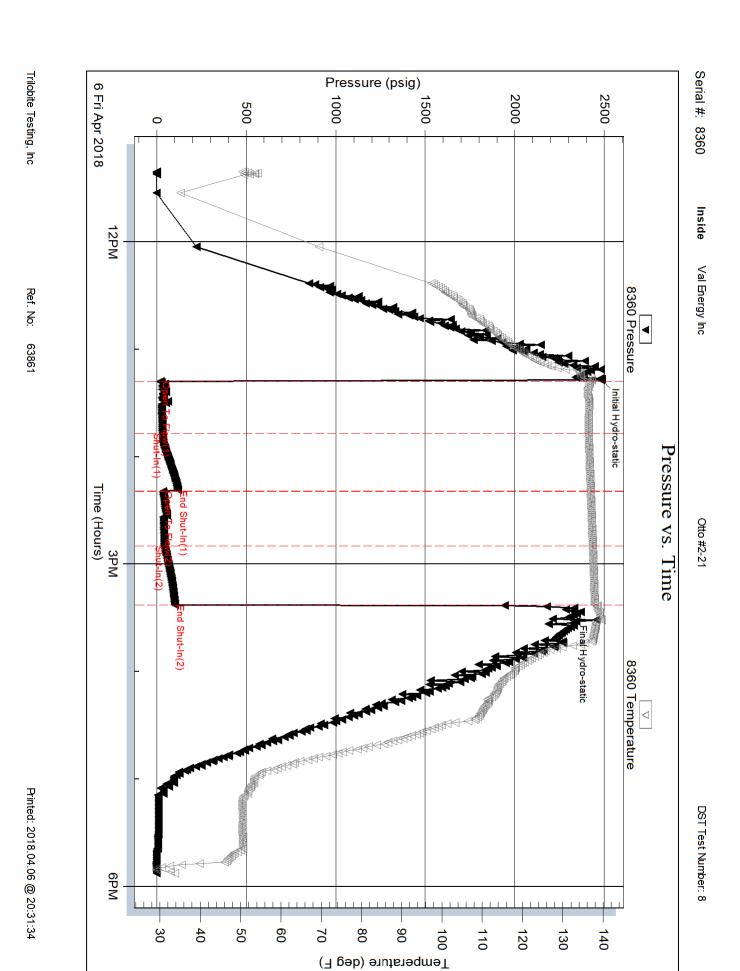
Total Length: Total Volume: 60.00 ft bbl

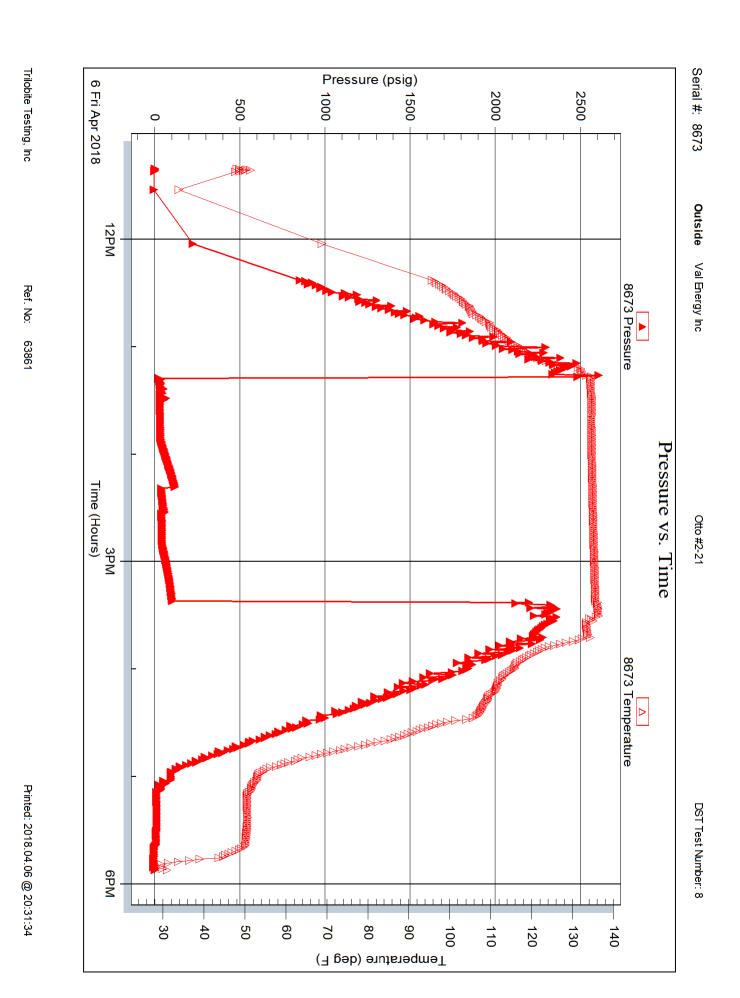
Num Fluid Samples: 0 Num Gas Bombs: 0

Laboratory Name: Laboratory Location:

Recovery Comments:

Printed: 2018.04.06 @ 20:31:34 Trilobite Testing, Inc Ref. No: 63861







## **REMIT TO**

QES Pressure Pumping LLC Dept:970 P.O.Box 4346 Houston,TX 77210-4346 MAIN OFFICE

P.O.Box884 Chanute,KS 66720 620/431-9210,1-800/467-8676 Fax 620/431-0012

Invoice# 812884

Invoice Date: 04/13/18 Terms: Net 30

Page 1

VAL ENERGY

125 N. Market, Ste. 1110 WICHITA KS 67202 USA

316-263-6688

Otto 2-21

\_\_\_\_\_\_

			=========	=========	
Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0453	Cement Pump Charge 4001' - 5000'	1.000	2,800.0000	30.000	1,960.00
CE0002	Equipment Mileage Charge - Heavy Equipment	30.000	7.1500	30.000	150.15
CE0710	Cement Delivery Charge	864.000	1.7500	30.000	1,058.40
CC5862	ThixoBlend III	150.000	26.0000	30.000	2,730.00
CC6075	Celloflake	125.000	3.0000	30.000	262.50
CC5831	Lite-Weight Blend VII (60:40:8)	500.000	17.5000	30.000	6,125.00
CC6125	Mud Flush, Viscous	500.000	0.6500	30.000	227.50
CP8485	5 1/2" Float Shoe, AFU	1.000	585.0000	30.000	409.50
CP8254	5 1/2" Latch Down Plug & Assembly	1.000	400.0000	30.000	280.00
CP8629	5 1/2" Basket	2.000	385.0000	30.000	539.00
CP8801	5 1/2" DV Tool	1.000	5,970.0000	30.000	4,179.00
CP8554	5 1/2" Centralizer	6.000	81.0000	30.000	340.20
CC6077	Kolseal	750.000	0.5000	30.000	262.50
				Subtotal	26,462.50
			Discounte	ed Amount	7,938.75
			SubTotal Afte	r Discount	18,523.75

Amount Due 28,217.38 If paid after 05/13/18

Tax:

1,228.42

Total:

19,752.17



PRESSURE PUMPING LLC
PO Box 884, Chanute, KS 66720

10428

	TICKET NUMBER	55101
)	LOCATION	Ockley K
	FOREMAN	James CV

<b>FIELD</b>	<b>TICKET</b>	&	TREATMEN	Ţ	REPORT
				W	

620-431-9210 or 800-467-8676 CEMENT DATE CUSTOMER# WELL NAME & NUMBER SECTION TOWNSHIP RANGE 4-7-18 85 2:21 21 CUSTOMER Levent TRUCK# DRIVER TRUCK# DRIVER 15 MAILING ADDRESS 160 Paul W 125 ZIP CODE STATE Windo

JOB TYPE 2 Stace HOLE SIZE 7 /8 HOLE DEPTH 4870 CASING SIZE & WEIGHT 5/2 155

CASING DEPTH 485/ DRILL PIPE TUBING OTHER DISSET 2736

SLURRY WEIGHT 14.2/25 SLURRY VOL 1.42 1.89 WATER gal/sk CEMENT LEFT IN CASING 39

DISPLACEMENT 114 70 DISPLACEMENT PSI/504 MIX PSI RATE

REMARKS: Safty meeting of 10 and 10 12 run float Equi, Centelizason 5 8, 11, 14, 17

Baskets on 2 and 47 D V ton In top of 475et 2936 vin cosing to be fair pump ball thrus Circ Int pump 5661 H.O, mad flogh 5661 H.O, spacer-mix 150 sks this abload III shut down release plus clear pump 5/ines dis place with 50 bb/weigt and 10/6/11 mad Theopos. 1-11

The land of 1565 @ 1520/5: Ping heid open text @ 520P5: Circulate Int

305 ks (H)

ACCOUNT CODE QUANITY OF UNITS DESCRIPTION OF SERVICES OF PRODUCT UNIT PRICE TOTAL

CEOYS3 / PUMP CHARGE 2800.00 2800.00

CEOOO2 30 MILEAGE 7.1.5 214.50

CEO710 28.8 For mileage activery 1.75 1512.00

CC 5862 1505ks Fh. x001 mo III 26.00 3900.00

CC 607 1750 4 Kel 3cal 50 375.00

CC 6075 15 # Sloseal 3.00 375.00

CC 6075 15 # Sloseal 3.00 375.00

CP 8954 1 5/2 latch down 9574 40000 400 000 CP 8629 2 5/2 best s 38500 77000 CP 8554 6 5/2 cc 24 cl 32x5 81.00 486.00 September 26462,50 5/2 Cc 24 cl 32x5 81.00 486.00 September 26462,50 528 7732.75

AUTHORIZTION Buh Amulia

TITLE

SALES TAX | 228.4 C

DATE 4-8+18

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

## ATTENTION: THESE TERMS AND CONDITIONS CONTAIN INDEMNITY PROVISIONS FOR DAMAGE TO PERSONS AND PROPERTY.

All Scrices or Products provided by QES Pressure Pumping LLC (fifthe Consolidated Oil Well Services for Products and Conditions unless superseded by a Master Service Agreement signed by the parties, in the event Customer does not accept these Terms and Conditions as written, Customer must request a Master Service Agreement from QES' Contracts Administration Department at msa@gesip.com.

The operations, services, supplies, materials, personnel or goods to be provided ("<u>Services</u>" or "<u>Products"</u> as applicable) by QES Pressure Pumping LLC ("QES") will be provided to you as customer ("<u>Customer</u>") in accordance with the following terms and conditions ("<u>Agraement</u>"). QES and Customer may be referred to as "Party" or "Parties".

- 1. <u>Price and Taxes</u>. Customer will pay QES for the Services or Products in accordance with QES' quoted price which exclude applicable taxes or process license fees. Customer shall pay all applicable taxes and process license fees related to the Services and/or Products. QES' prices are subject to change
- 2. Terms of Payment, Customer will pay QES cash in advance for Services and Products unless QES has approved credit prior to the penformance of the Services and/or delivery of the Products. Credit terms for approved accounts require full payment of the invoiced amount within 30 days from the date of invoice. All invoices not paid within 30 days will be charged an interest rate of 11% per month or the maximum rate allowed under applicable state law, whichever is higher. Customer will be responsible for any fees incurred by QES in the collection of any amounts owed to QES including but not limited to attorney's fees and/or collection fee costs.
- 3. Proof of Services or Delivery of Products. QES will furnish verification of proof of Services performed and Product delivered to Customer's representative at the time of performance of the Services or Product delivery. Customer agrees to sign and return such verification indicating Customer's acceptance of the
- 4. <u>Delivery or Completion</u>. All liability and responsibility of QES ceases when (1) Products are delivered to the Customer by QES and no longer in the care, custody and control of QES or (2) when the carier receives the Products and/or shipment. QES will not be responsible for loss or damage to Products in transit or for delays of carriers in delivering goods, in case of shortage, non-conformance, or apparent damage, it is the Customer's responsibility to secure written acknowledgement from the carrier before Customer accepts delivery. Additionativ, QES will not be fiable for any damage for delays in delivery completion due to a Force Majeure (as defined below), acts or omissions of the Customer, third party material or manufacturing delays, impossibility or impracticability of performance or any other cause or completion date will be extended for a period equal to any such delay, and the purchase or service will not be vold or voldable as a result thereof.
- 5. Well or Service Site Conditions, Customer, Inaving custody and control of the well and/or service site, and having superior knowledge of the same and the conditions surrounding them, warrant that the well and/or service site will be in proper condition to receive and accommodate Services and Products. Upon CBS' request; Customer' will provide documentation to verify that the well or service site is adequate to support the Services and the delivery of Products. Customer also warrants that CBS' personnel and equipment will be able to safely access, the well and service site and that any special equipment or good improvements required for such access will be the responsibility of Customer, unless otherwise agreed
- 6. Chemical Handling and Hazardous Materiats. Customer agrees that for any waste created as part of the Services, Customer will be considered the "generator" for purposes of any applicable laws or regulations pertaining to the transportation, storage and handling of chemicals and hazardous materials.
- 7. <u>Data, Data Transmission and Storage</u>, QES does not warrant or guarantee the accuracy of any research enalysis, survey, or other data generated for the Services. QES is not responsible for an accidental-or intentional interception of such data by third parties and it is the responsibility of the Customer to safeguard such data against loss including any need to secure digital or paper copies for

## 8. WARRANTIES - LIMITATION OF LIABILITY

- 8. WARRANTIES LIMITATION OF LIABILITY.
  a) QES warrants that the Services and Products will: (i) be free from defects in materials and workmanship; (ii) be performed in a good and workmanilika manner, in accordance with good elifield servicing practices; and (iii) conform to the plans, specifications and technical information provided in writing by Customer until the Services or Products are accepted by Customer of CES' contractual obligations are met. In the event that Customer discovers a defect in the Services or Products within the warranty period specified above, Customer will notify CES of such defect. In the event that CES confirms that the Services or Products are defective, QES's lability and Customer's exclusive remedy in any cause of action (whether in tont, contract, breach of warranty or otherwise) arising out of the sale or use of any Services or Products is expressly limited to, at QES' oplion, the (i) replacement of such Services or Products are products upon their return to QES or (ii) a credit to Customer for the full price paid by Customer for the defective segment of the Services or Products upon their return to QES, in the case of products or parts not wholly of QES' manufacture, QES' šability will be limited to the extent of its recovery from the manufacture of such products or parts under its lability to QES. CES will not be liable for any damages, claims, losses or expenses of Customer resulting from such defects or for damages resulting from detays, inset of use, or other direct, incidental, punitive or consequential damages of any kind. QES will not be responsible for: (i) failures of Services that have been in any way tampored with or altered by anyone other (han an authorized representative of QES; (iii) failures due to lack of compliance with recommended maintenance procedures; and (iii) products requiring replacement due to normal wear and tear.
- b) EXCEPT FOR THE WARRANTIES EXPRESSLY STATED ABOVE, THERE ARE NO OTHER WARRANTIES. THE PARTIES EXPRESSLY EXCLUDE AND CUSTOMER WAIVES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
- c) IN NO EVENT WILL QES' ENTIRE LIABILITY (IN TORT, CONTRACT, WARRANTY, INFRINGEMENT OR OTHERWISE) TO CUSTOMER EXCEED THE PURCHASE PRICE ACTUALLY PAID BY CUSTOMER FOR THE SERVICES OR PRODUCTS THAT GIVE RISE TO A DISPUTE.

- 9. INDEMNIFICATION AND WAIVER OF CONSEQUENTIAL DAMAGES.
  9.1 For purpose of this Section 9, the following definitions will apply: "QES Group" means QES Pressure Pumping LLC, its parent company, and affiliated companies, and its and their officers, directors, employees, contractors, subcontractors and invitees. "Qustomer Group" means Customer, begren (if any), subsidiary and affiliated companies, co-owners, co-venturers, partners and any entity with whom Customer has an economic interest with respect to the Services, including Customer's joint interest owners and perhass and its and their officers, directors, employees, contractors (not including QES), subcontractors and invitees.
- 9.2 QES INDEMNITY. QES AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY, ILLNESS, OR DEATH OF ANY MEMBER OF QES GROUP OR, DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF QES GROUP.
- 9.3 CUSTOMER INDEMNITY. CUSTOMER AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY ILLNESS, OR DEATH OF ANY MEMBER OF CUSTOMER GROUP OR DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF CUSTOMER GROUP.
- 9.4 <u>WELL.</u> CUSTOMER WILL RELEASE, PROTECT, DEFEND, AND INDEMNIFY GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER IN THE EVENTS OF: (I) LOSS OR DAMAGE TO ANY GEOLOGICAL FORMATION, STRATA OR OIL OR GAS RESERVOIR OR MINERAL OR WATER RESOURCE BENEATH THE SURFACE OF THE LAND OR WATER, (II) LOSS OR DAMAGE TO THE HOLE OR WELL, (III)

IMPAIRMENT OF PROPERTY RIGHTS OR OTHER INTERESTS IN OR TO OIL, GAS, MINERAL OR WATER RESOURCES, AND MY REGAINING CONTROL OF ANY WILD WELL OR OUT OF CONTROL WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING REMOVAL OF WRECK, DEBRIS, EQUIPMENT, AND HAZARDOUS MATERIALS AND REMEDIATING ENVIRONMENTAL DAMAGE.

- 9.5 POLLUTION RESPONSIBILITY. Subject to paragraphs 9.2 and 9.3, it is understood and agreed between Customer and QES that the responsibility for pollution shall be as follows:

  (a) QES WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND OF CHARACTER ARISING FROM POLLUTION OR CONTAMINATION WHICH ORIGINATES ABOVE THE SURFACE OF THE LAND OR WATER FROM THE EQUIPMENT OF ANY MEMBER OF QES GROUP MAINTAINED IN QES GROUPS' CARE, CUSTODY AND CONTROL, AND ARISING FROM THE PERFORMANCE OF THE SERVICES.
  - SERVICES.

    (b) CUSTOMER WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER ARISING FROM POLLUTION OTHER THAN THAT DESCRIBED IN SECTION 9.5(A) ABOVE, WHICH MAY OCCUR DURING THE CONDUCT OF OPERATIONS HEREUNDER, INCLUDING, BUT NOT LIMITED TO, POLLUTION RESULTING FROM FIRE, BLOWOUT, CRATERING, SEEPAGE OR OTHER UNCONTROLLED FLOW OF OIL, GAS OR OTHER SUBSTANCE.
- 9.6 WAIVER OF CONSEQUENTIAL DAMAGES. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, CUSTOMER AND QES FURTHER AGREE THAT NEITHER PARTY WILL BE LIABLE TO THE OTHER OR EACH OTHER'S RESPECTIVE GROUP FOR ANY CONSEQUENTIAL, INCIDENTAL OR NOIREST DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF PROFIT, AND ALL CLAIMS FOR SUCH LOSSES ASSETTED BY MEMBERS OF CUSTOMER GROUP, LOSS AGREES TO INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF GES GROUP.
- 9.7 EXCEPT AS OTHERWISE EXPRESSLY LIMITED BY THIS AGREEMENT OR BY LAW, ALL RELEASES, INDEMNITY OBLIGATIONS AND OTHER LIABILITIES ASSUMED UNDER THIS AGREEMENT WILL BE WITHOUT LIMIT AND WITHOUT REGARD TO THE CAUSE OR CAUSES, INCLUDING, WITHOUT LIMITATION, PREEXISTING CONDITIONS, UNSEAWORTHINESS, STRICT LIABILITY, WILLFUL MISCONDUCT, AND THE SOLE, JOINT, GROSS, OR CONCURRENT NEGLIGENCE OF ANY PARTY.
- 9.8. Each Party hereunder agrees to support its indemnity obligations with liability insurance coverage with limits of liability not less than fan million dollars (\$10,000,000). It is the express intention of the Parties that the Indemnities contained herein apply to the fullest extent permitted by applicable law, and in no event will a Party's indemnity obligation be limited to the amount of insurance carried by each Party. turance carried by each Party.

#### THIS SECTION 9 WILL SURVIVE THE TERMINATION OR EXPIRATION OF THIS AGREEMENT.

- 10. Insurance. All insurance policies of either Party, in any way related to the Services, whether or not required by this Agreement, shall to the extent of the risks and liabilities assumed by such party; (i) name the other party group as additional insured (except for worker's compensation, OEE/COW, or professional liability policies), (ii) waive subrogation as to the other party group; and (iii) be primary and non-contributory to any insurance of the other party group.
- 11. Force Majeure. Except the obligation to make payments when due, neither OES nor Customer will be flable nor deemed to be in breach of this Agreement for any delay or failure in performance resulting from the acts of God, civil or military authority, material change of law, any governmental action, acts of public enemy, war, accidents, fires, explosions, earthquakes, floods, failure of transportation, nional strikes, acute or unusual labor, material or equipment shortages, or any similar or dissimilar cause beyond the reasonable control of either Party. The Party so affected will as soon as such a cause ovent occurs promptly notify the other Party in writing concerning the cause and the estimated effect and take reasonable measures with proper dispatch to remety the condition, in the event Customer declares a force majeure occurrence, CES with be compensated at the standard daily rate for the materials and personnel that are standing idle as a consequence of the force majeure occurrence until Customer terminates the work order or work resumes.
- 12. <u>Governing Law.</u> This Agreement will be governed by the laws of the State of Texas, without regard to its conflicts of law provisions. The Parties agree to submit to the exclusive jurisdiction of the federal or state courts located in Houston, Harris County, Texas with respect to any end elf disputes that arise out of or are related in any way to the subject matter of this Agreement. This Section 12 will survive the termination or expiration of this Agreement.
- 13. Independent Contractor. QES will be an Independent contractor with respect to the Services performed, and neither QES nor enyone employed by QES will be deemed for any purpose to be the employee, agent, servant, borrowed servant or representative of Customer.
- 14. <u>Severability.</u> In the event any provision of this Agreement is inconsistent with or contrary to any applicable law, rule or regulation, the provision will be deemed modified to the extent required to comply, and the remaining terms, as modified, will remain in full force and effect.
- 15. Weiver. A walker on the part of either Perty of any breach of any term, provision or condition of this Agreement will not constitute a precedent and not blud either Party hereto to a waiver of any succeeding or other breach of the same or any other term, provision or condition of this Agreement.
- 16. Entiro Agreement. This Agreement contains the entire agreement of the Parties with regard to the subject matter hereof and supersedes any prior oral and written egreements, contracts, representations or warranty between the Parties relating to the subject matter hereof. No entendment or modification of this Agreement will be effective unless it is in writing and signed by an authorized representative of each Party. If the Parties enter into a Master Service Agreement, then any term or condition herein which conflicts with the provisions of such Master Service Agreement will be deemed invalid.



## REMIT TO

QES Pressure Pumping LLC Dept:970 P.O.Box 4346 Houston,TX 77210-4346

\_\_\_\_\_\_\_

MAIN OFFICE

P.O.Box884 Chanute,KS 66720 620/431-9210,1-800/467-8676 Fax 620/431-0012

Invoice# 812738

Invoice Date: 03/29/18 Terms: Net 30 Page 1

VAL ENERGY

125 N. Market, Ste. 1110 WICHITA KS 67202 USA

316-263-6688

Otto 2-21

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0471	Cement Pump Charge 301' - 500' (Coalbed/Methane)	1.000	1,150.0000	30.000	805.00
CE0002	Equipment Mileage Charge - Heavy Equipment	30.000	7.1500	30.000	150.15
CE0711	Minimum Cement Delivery Charge	1.000	660.0000	30.000	462.00
CC5871	Surface Blend II, 2% Gel/3% CaCl	190.000	24.0000	30.000	3,192.00
				Subtotal	6,584.50
			Discounte	d Amount	1,975.35
			SubTotal After	r Discount	4,609.15

Tax:

Amount Due 6,949.30 If paid after 04/28/18

255.36

Total:

4,864.51



TICKET NUMBER_	55059
LOCATION	DoKles K5
FOREMAN -	FORVY

PRESSURE PUMPING LLC

FIELD TICKET & TREATMENT REPORT

Invoic#812738 PO Box 884, Chanute, KS 66720 620-431-9210 or 800-467-8676 CEMENT DATE CUSTOMER# WELL NAME & NUMBER TOWNSHIP SECTION RANGE COUNTY 85 3-26-18 21 CUSTOMER LEVENTIS TRUCK# DRIVER TRUCK# IW SOW DRIVER MAILING ADDRESS PDW 731 フフクーアノンフ ZIP CODE 61202 JOB TYPE **HOLE SIZE HOLE DEPTH CASING SIZE & WEIGHT\_ CASING DEPTH DRILL PIPE** TUBING OTHER SLURRY VOL SLURRY WEIGHT\_ WATER gal/sk CEMENT LEFT in CASING DISPLACEMENT PSI MIX PSI 15 crca ACCOUNT **QUANITY or UNITS DESCRIPTION of SERVICES or PRODUCT UNIT PRICE** TOTAL CODE CE047 PUMP CHARGE 150.00 1150.00 CADOOS MILEAGE 24.00

Ravin 3737 , **AUTHORIZTION** 

SALES TAX **ESTIMATED** TOTAL

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form. ATTENTION: THESE TERMS AND CONDITIONS CONTAIN INDEMNITY PROVISIONS FOR DAMAGE TO PERSONS AND PROPERTY.

All Services or Products provided by QES Pressure Pumping LLC (fix/a Consolidated Oil Well Services LLC) are subject to linese Terms and Conditions unless superseded by a Master Service Agreement signed by the parties. In the event Customer does not accept these Terms and Conditions as written, Customer must request a Master Service Agreement from QES' Contracts Administration Department at msa@gaslp.com. 

The operations, services, supplies; materials, personnel or goods to be provided ("Services" or "Products as applicable) by QES Pressure Pumpling LLC ("QES") will be provided to you as customer ("Gustomer") in accordance with the following Terms and conditions ("Agraement"). QES and Customer may be referred to as "Party" or "Parties".

- Price and Taxes. Customer will pay QES for the Services or Products in accordance with QES' quoted
  price which exclude applicable taxes or process license tass. Customer shall pay all applicable taxes
  and process license fees related to the Services and/or Products. QES' prices are subject to change
- 2: Terms of Payment. Customer will pay QES cash in advance for Services and Products unless QES has approved credit prior to the performance of the Services and/or delivery of the Products. Credit terms for approved accounts require full payment of the invoiced amount within 30 days from the date of invoice. All invoices not paid within 30 days will be charged an Interest rate of 14% per month of the maximum rate allowed under applicable state law, whichever is higher. Customer will be responsible for any fees incurred by QES in the collection of any amounts owed to QES including but not limited to attorney's fees and/or collection fee costs. and/or collection fee costs.
- 3. <u>Proof of Services or Delivery of Products.</u> CES will furnish verification of proof of Sérvicès performed and Product deliversed to Customer's representative at the time of performance of the Services or Product delivery. Customer agrees to sign and return such verification indicating Customer's acceptance of the Services or Products.
- 4: <u>Delivery or Completion</u>. All liability and responsibility of QES ceases when (1) Products are delivered to the Customer by QES and no longer in the care, custody and control of QES or (2) when the carrier receives the Products entitor shipment. QES will not be responsible for loss or damage to Products in transit or for delays of carriers in delivering goods. In case of shortage, non-conformance, or apparent damage, it is the Customer's responsibility to secure written acknowledgement from the carrier before Customer accepts delivery. Additionally, QES will not be liable for any damage for delays in delivery or completion due to a Force Majeure (as defined below), acts or omissions of the Customer info party material or manufacturing delays, impossibility or impracticability of performance or any other cause or causes beyond the control of CES. In the event of a delay caused by the aforesald, the delivery or completion date will be extended for a period equal to any such delay, and the purchase or service will not be void or, yoldable as a restit thereot.
- not be void or Service Sile Conditions. Customer, having custody and control of the well end/or service site, and having superior knowledge of the same and the conditions auriturating them; warrant that the well and/or service site will be in proper condition to receive and accountmodate Services and Products. Upon addresservices and Provided documentation to verify that the well or service site is adequate to support the Services and the delivery of Products. Customer also warrants that QES penale and equipment will be able to safely access the well and service site and that any special equipment or road improvements required for such access will be the responsibility of Customer, unless otherwise egreed to by the outlies.
- 6. <u>Chemical Handlinn and Hazardous Materials</u>. Customer agrees that for any waste created as part of the Services, Customer will be considered the "generator" for purposes of any applicable laws or regulations pertaining to the transportation, storage and handling of chemicals and hazardous materials:
- 7. <u>Data Data Transmission and Storage.</u> QES does not warrant or guarantee the accuracy of any research analysis, survey, or other data generated for the Services. QES is not responsible for any accidental or intentional interception of such data by third parties and it is the responsibility of the Customer to safeguard such data against loss including any need to secure digital or paper copies for storage.

- 8. WARRANTIES LIMITATION OF LIABILITY

  a) QES warrants that the Services and Products will: (i) be free from defects in materials and workmankly; (ii) be preferred in a good and workmanklike manner, in accordance with good oilifeld servicing practices; and (iii) conform to the plans, specifications and technical information provided in writing by Customer until the Services or Products are accepted by Customer or QES' contractual obligations are met, in the event that Customer discovers a defect in the Services or Products within the warranty-period specified above, Customer, will notify QES of such defect. In the event that QES confirms that the Services or Products are defective, QES's liability and Customer's exclusive remedy in any cause of action (whether in tort, contract, breach of warranty or otherwise) arising out of the sale or use of any Services or Products is expressly limited to, at QES' option, the (i) replacement of such Services or Products on the contract of the full price paid by Customer for the defective segment of the Services or Products upon their return to QES or (ii) a credit to Customer for the full price paid by Customer for the defective segment of the Services or Products upon their return to QES or from the manufacturer of such products or parts under its liability will be limited to the extent of its recovery from the manufacturer of such products or parts under its liability to QES. QES will not be liabile for any damages, claims, losses or expenses of Customer resulting from such defects or for damages resulting from defays, loss of use, or other direct, indirect, incidental, punificent all, punifice or consequential damages of any kind. QES will not be responsible for: (i) failures of Services that have been in any way tampered with or altered by anyone other than an authorized representative of QES' (ii) failures due to lack of compilance with recommended maintenance procedures; and (iii) products requiring replacement due to normal wear and tear.
- b) EXCEPT FOR THE WARRANTIES EXPRESSLY STATED ABOVE, THERE ARE NO OTHER WARRANTIES. THE PARTIES EXPRESSLY EXCLUDE AND CUSTOMER WAIVES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
- c) IN NO EVENT WILL QES' ENTIRE LIABILITY (IN TORT, CONTRACT, WARRANTY, INFRINGEMENT OR OTHERWISE) TO CUSTOMER EXCEED THE PURCHASE PRICE ACTUALLY PAUD BY CUSTOMER FOR THE SERVICES OR PRODUCTS THAT GIVE RISE TO A DISPUTE. THIS PROVISION WILL SURVIVE ANY TERMINATION OF THIS AGREEMENT.

- 9. INDEMNIFICATION AND WAIVER OF CONSEQUENTIAL DAMAGES.
  9.1 For purpose of this Section 9, the following definitions will apply: "QES Group" means QES Pressure Pumping LLC, its parent company, and affiliated companies, and its and their officers, directors, employees, contractors, subcontractors and invitees. "Qualificer Group" means Customer, its parent (if any), subsidiary and affiliated companies, co-owners, co-venturers, partners and any entity with whom Customer has an economic interest with respect to the Services, including Customer's joint interest owners and partners and its and their officers, directors, employees, contractors (not including QES), subcontractors and invitees.
- 9.2 <u>QES INDEMNITY.</u> QES AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY, ILLNESS, OR DEATH OF ANY MEMBER OF QES GROUP OR, DAMAGE TO OR LOSS OF PROPERTY OF ANY MEMBER OF QES GROUP.
- 9.3 <u>CUSTOMER INDEMNITY</u>. CUSTOMER AGREES TO PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, ARISING IN CONNECTION WITH THE SERVICES, ON ACCOUNT OF BODILY INJURY ILLNESS, OR DEATH OF ANY MEMBER OF CUSTOMER GROUP OR DAMAGE TO OR LOSS OF, PROPERTY OF ANY MEMBER OF CUSTOMER GROUP.
- 9.4 WELL, CUSTOMER WILL RELEASE, PROTECT, DEFEND, AND INDEMNIFY GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER IN THE EVENTS OF: (I) LOSS OR DAMAGE TO ANY GEOLOGICAL FORMATION, STRATA OR OILL OR GAS RESERVOIR OR MINERAL OR WATER RESOURCE BENEATH THE SURFACE OF THE LAND OR WATER, (II) LOSS OR DAMAGE TO THE HOLE OR WELL, (III)

IMPAIRMENT OF PROPERTY RIGHTS OR OTHER INTERESTS IN OR TO CIL, GAS, MINERAL OR WATER RESOURCES, AND (IV) REGAINING CONTROL OF ANY WILD WELL OR OUT OF CONTROL WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING REMOVAL OF WRECK, DEBRIS, EQUIPMENT, AND HAZARDOUS MATERIALS AND REMEDIATING ENVIRONMENTAL DAMAGE.

- 9.5 POLLUTION RESPONSIBILITY. Subject to paragraphs 9.2 and 9.3, it is understood and agreed between Customer and QES that the responsibility for pollution shall be as follows:

  (a) QES WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT; DEFEND AND INDEMNIFY CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND, OF CHARACTER ARISING FROM POLLUTION OR CONTAMINATION WHICH ORIGINATES ABOVE THE SURFACE OF THE LAND OR WATER FROM THE EQUIPMENT OF ANY MEMBER OF QES GROUP MAINTAINED IN QES GROUPS CARE, CUSTODY AND CONTROL, AND ARISING FROM THE PERFORMANCE OF THE SERVICES.
  - SERVICES.
    (b) CUSTOMER WILL ASSUME RESPONSIBILITY FOR CONTROL AND REMOVAL OF AND WILL PROTECT, DEFEND AND INDEMNIFY GES GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER ARISING FROM POLLUTION OTHER THAN THAT DESCRIBED IN SECTION 9.5(A) ABOVE, WHICH MAY OCCUP DURING THE CONDUCT OF OPERATIONS HEREUNDER, INCLUDING, BUT NOT LIMITED TO, POLLUTION RESULTING FROM FIRE, BLOWOUT, CRATERING, SEEPAGE OR OTHER UNCONTROLLED FLOW OF OIL, GAS OR OTHER SUBSTANCE.
- 9.6 WAIVER OF CONSEQUENTIAL DAMAGES. NOTWITHSTANDING ANY PROVISION TO THE CONTRARY, CUSTOMER AND DES FURTHER AGREE THAT NEITHER PARTY WILL BE LIABLE TO THE OTHER OR EACH OTHER'S RESPECTIVE GROUP FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF PROFIT, LOSS OF PROPUCTION, REVENUE, OR ANTICIPATED BUSINESS ("LOSSES"), CUSTOMER AGREES TO INDEMNIFY AND HOLD DES GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF CUSTOMER GROUP, OES AGREES TO INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR SUCH LOSSES ASSERTED BY MEMBERS OF DES GROUP.
- 9.7 EXCEPT AS OTHERWISE EXPRESSLY LIMITED BY THIS AGREEMENT OR BY LAW, ALL RELEASES, INDEMNITY OBLIGATIONS AND OTHER LIABILITIES ASSUMED. UNDER THIS AGREEMENT WILL BE WITHOUT LIMIT AND WITHOUT REGARD TO THE CAUSE OR CAUSES, INCLUDING, WITHOUT LIMITATION, PREEXISTING CONDITIONS, UNSEAWORTHINESS, STRICT LIABILITY, WILLFUL MISCONDUCT, AND THE SOLE, JOINT, GROSS, OR, CONCURRENT NEGLIGENCE OF ANY PARTY.
- 9.8. Each Party hereunder agrees to support its indemnity obligations with liability insurance coverage with limits of liability not less than ten million dollars (\$10,000,000). It is the express intention of the Parties that the indemnities contained herein apply to the fullest extent parmitted by applicable law, and in no event will a Party's Indemnity obligation be limited to the amount of insurance carried by each Party.

THIS SECTION 9 WILL SURVIVE THE TERMINATION OR EXPIRATION OF THIS AGREEMENT.

- 10. <u>Insurance.</u> All Insurance policies of either Party, in any way related to the Services, whether or not required by this Agreement, shall to the extent of the risks and flabilities assumed by such party. (i) name the other party group as additional insured (except for worker's compensation, OEE/COW, or professional liability policies), (ii) waive subrogation as to the other party group; and (iii) be primary and non-contributory to any Insurance of the other party group.
- 11. Force Malaura. Except the obligation to make payments when due, neither QES nor Customer will be liable nor deemed to be in breach of this Agreement for any delay or failure in performance resulting from the acts of God, civil or military authority, material change of law, any governmental action, acts of public enemy, war, accidents, fires, explosions, earthquakes, floods, failure of transportation, national strikes, acute or unusual labor, material or equipment shortages, or any similar or dissimilar cause beyond the reasonable control of either Party. The Party so affected will as soon as such a cause or event occurs promptly notify the other Party in writing concerning the cause and the estimated effect and take reasonable measures with proper dispatch to remedy the condition. In the event Customer declares a force majeure occurrence, QES will be compensated at the standard daily rate for the materials and personnel that are standing idle as a consequence of the force majeure occurrence and consequence of the force majeure occurrence work resumes.
- 12. <u>Governing Law.</u> This Agreement will be governed by the laws of the State of Texas, without regard to its conflicts of law provisions. The Parties agree to submit to the exclusive jurisdiction of the federal or state courts located in Houston, Harris County, Texas with respect to any and all disputes that arise out of or are related in any way to the subject matter of this Agreement. This Section 12 will survive the termination or expiration of this Agreement. . X
- 13. <u>Independent Contractor.</u> QES will be an Independent contractor with respect to the Services performed, and neither QES nor anyone employed by QES will be deemed for any purpose to be the employee, agent, servant, borrowed servant or representative of Customer.
- 14. <u>Saverability</u> in the event any provision of this Agreement is inconsistent with or contrary to any applicable law, rule or regulation, the provision will be deemed modified to the extent required to comply, and the remaining terms, as modified, will remain in full force and effect.
- 15. Weiver, A waiver on the part of either Party of any breach of any term, provision or condition of this Agreement will not constitute a precedent and not bind either Party herato to a waiver of any succeeding or Agreement will not constitute a pracedent and not once some reary rendered other breach of the same or any other term, provision or condition of this Agreement.
- 16. Entire Agreement. This Agreement contains the entire agreement of the Parties with regard to the subject matter hereof and supersedes any prior oral and written agreements, contracts, representations or warranty between the Parties-relating to the subject matter hereof. No amendment or modification of this Agreement will be effective unless it is in writing and signed by an authorized representative of each Party. If the Parties enter into a Master Service Agreement, then any term or condition herein which conflicts with the provisions of such Master Service Agreement will be deemed invalid.

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